

SMOKE SIGNALS

For Radio Amateurs • By Radio Amateurs

Published Monthly Since 1969 • Our 30th Year

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REACT? YES, BUT DON'T GET TOO CARRIED AWAY.

The Year Two Thousand

By Richard Regent, K9GDF

Approaching like a colliding meteor, the Year 2000 (Y2K) millennium bug is on its way. It can attack computer programs, convince microprocessors to misread dates and potentially interrupt service. A scary moment in time which may affect customer service processes, even battery operated laptops and mobile radios.

How is this possible? About 50 years ago, computer wizards designed hardware, software and microcomputer chips to only use the last two digits of the year, thus saving memory and minimizing hardware costs. The millennium bug causes date sensitive programs in some computers and products with computer chips to shut down or lock up when they read the "00" in a year's digits. To chips "00" means they're back in the year 1900 instead of the year 2000. While people celebrate the 2000th new year, chips will presume they are back in an era before spark-gap transmitters and might become delirious and incomprehensible.

Any date based unit, those using time of day or day of week, could be affected. In the home this might be a microwave oven, programmable thermostat or lawn sprinkling system. With an older VCR, it may be only necessary to reset the record-ahead function. Estimates are that seven percent of computer programs could fail. You can check your computer for Y2K problems by setting its clock a few minutes before the year 2000 and then letting it run.

One of my computer financial spreadsheet programs uses two digits for the year date format before 2000, but requires four digits for the year 2000 or later. Both New Years Day "1/1/2000" and the previous day "12/31/99" take the same number of column digits. Starting with January 10, the column needs to be another digit wider or it will display or print an error like "*****" instead of the correct date.

Some nervous folks believe that medical health care devices and equipment could stop working because of Y2K. Radiation therapy machines, for example, use internal clocks to measure the age of radioactive material. If their clock reads "00" as 1900 and assumes the material is 100 years old, a massive overdose to a patient treated in the new year could result. Overseas medical supplies, like insulin shipments, that usually arrive a month after placing an order, might be delayed by months.

Consumers might not be able to write checks or use charge cards on New Year's Day. If Automatic Teller Machines can't read the date, they could become stubborn if an error results and refuse to honor a request for cash. Transactions with the stock market, small banks, and thrift or credit unions might also be affected. Fortunately, the Wisconsin Bankers Association

assures Y2K compliance in our state. Federal government checks, like Social Security and disability payments shouldn't be delayed. Perhaps having some extra cash on hand might be prudent.

Wisconsin's Governor's Blue Ribbon Task Force has identified 100 items, mostly health and safety issues, that could be affected by Y2K. The Task Force also has concerns with the justice department, banks and insurance companies. Law officers will need vehicle and driver license verification, especially right after the big New Year parties. Hopefully correct data will be available. The Internal Revenue Service will have spent \$1 billion in their Y2K studies and readiness. The IRS is nearly complete in going over the 48.7 million lines of basic coding for systems that record and calculate individual taxes. The cost of Y2K is expected to be \$600 billion worldwide!

Electric power could snap off this New Year's Eve, or put a halt to Straight Key Night for a while. Officials are concerned about power plant controls, the possibility of some scattered power outages and businesses electric interruptions. Some doomsdayers predict that if a nuclear power plant core were to cool, it could take months to return back on line producing electric power.

So will your power stay on? Wisconsin Electric anticipates being ready to continue service and maintain public safety. They report complete assessment of thousands of critical embedded systems and important business applications as well as most portions of the computer infrastructure. Wisconsin Electric's year 2000 goal is simple: To identify and resolve problems on critical systems that may affect power-related services when midnight strikes on January 1, 2000. Today, 75 full-time staff members are dedicated to Y2K and more than \$30 million will be invested in their critical systems readiness. More information

Please turn to page 6

Check it out....

The Automatic Packet Reporting System, Part 2

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The Final Voyage of the USCG Icebreaker "Glacier"

Part 4

Page 8

APRIL 22: AMATEUR RADIO OPERATOR RECOGNITION DAY

SEE PAGE 13



OFFICE OF THE GOVERNOR

A PROCLAMATION

WHEREAS, during times of national and state emergencies amateur radio operators continue to provide communication resources; and

WHEREAS, these communications resources are provided at no cost to the Wisconsin taxpayer; and

WHEREAS, there continues to be a need for amateur radio operators to provide emergency communication capabilities as a backup resource during state and national emergencies; and

WHEREAS, amateur radio organizations such as the Radio Amateur Civil Emergency Services (RACES) and the Amateur Radio Emergency Services (ARES) are organized and trained to provide emergency communication support; and

WHEREAS, amateur radio clubs throughout the State of Wisconsin provide radio courses of instruction, encourage and assist with grade school and high school programs about amateur radio, and provide the opportunity to become a licensed amateur radio operator; and

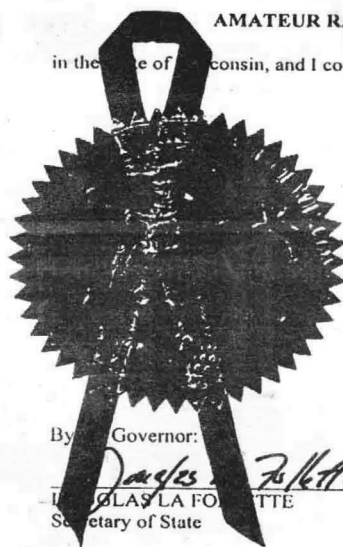
WHEREAS, amateur radio operators informed the world about such events as Wisconsin's Sesquicentennial and Wisconsin's circus heritage including the Circus World Museum, the Great Circus Train, and the Great Circus Parade; and

WHEREAS, amateur radio operators, participating in SKYWARN, provide trained and radio equipped severe weather spotters to assist the National Weather Service and the State of Wisconsin;

NOW, THEREFORE, I, TOMMY G. THOMPSON, Governor of the State of Wisconsin, do hereby proclaim April 22, 1999 as

AMATEUR RADIO OPERATOR RECOGNITION DAY

in the State of Wisconsin, and I commend this observance to all citizens.



By Governor:

By Secretary of State:

IN TESTIMONY WHEREOF, I have hereunto set my hand and caused the Great Seal of the State of Wisconsin to be affixed. Done at the Capitol in the City of Madison this seventeenth day of February in the year one thousand nine hundred ninety-nine.

Tommy G. Thompson

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Edited by Kenneth A. Ebnetter, K9EN, 822 Wauona Trail, Portage, WI 53901 • kebnetter@palacenet.net

Swapfests and Other Social Events

FRIDAY-SATURDAY, APRIL 9-10, 1999. AES Superfest 99. Held at Amateur Electronic Supply, 5710 W. Good Hope Road, Milwaukee, WI 53223. Manufacturers representatives will be there to meet with you and talk about their equipment. See ad elsewhere BSSS for further information.

SUNDAY, APRIL 11, 1999. MARA Swapfest, Madison, WI. Middleton Conference Center. (Same place as last year) Contact: MARA, PO Box 8890, Madison, WI 53708-8890. (Watch for full ad in upcoming issues of BSSS.)

SATURDAY, MAY 1, 1999. The Ozaukee Radio Club will sponsor its twenty first Annual Cedarburg Swapfest at the Circle-B Recreation Center, Cedarburg, WI. Contact Joe Holly, ORC Swapfest Chairman, 1702 Holly Lane, Grafton, WI 53024. (414) 377-2137 or Skip Douglas at (414) 284-3271.

SATURDAY, MAY 8, 1999. The Lakeshore Hamfest at Manitowoc County Expo, Manitowoc, WI. Contact: Red, N9GHE (920) 684-3733 or Fred, (920) 682-9312. ManCoRad Radio Club, PO Box 204, Manitowoc, WI 54221-0204.

SUNDAY, JUNE 6, 1999. The Central Wisconsin Radio Amateurs, 22nd annual Swapfest and Auction at Junction City, WI. (Stevens Point area.) Contact: John Feltz, W9JN, 973 E. First St., Junction City, WI 54443-9614. (715) 457-2506. e-mail: jfw9jn@tznnet.com

SATURDAY, JULY 10, 1999. South Milwaukee Amateur Radio Club Swapfest, American Legion Park, Shepard Avenue, South Milwaukee, WI. Contact South Milwaukee ARC, P.O. Box 102, South Milwaukee, WI 53172. (414) 762-3235.

SUNDAY, JULY 25, 1999. Racine, WI. The Racine Megacycle Club, Amateur Radio & Computer Show. Contact: e-mail: w9udu@wi.net

voice mail: (414) 552-6RMC
web page: <http://www2.wi.net/~hamradio/>

SATURDAY, AUGUST 14, 1999. Circus City Swapfest, Baraboo, WI. Contact: Steve Schulze, N9UDO, (608) 356-2313/356-4777 or Bill Klinkner, N9KXX, (608) 643-6908/643-6453. e-mail: <http://www.thelorax.com/~ssschulze/hamfest.htm>

See also the back page and flyer ads for additional information on many of these events.



CLUB MEETINGS

Due to space limitations, we cannot always carry the full listing of Wisconsin and area club meetings. Please see the September 1998 meetings column for the latest complete listing. The following changes have been reported to BSSS since that listing.

EAU CLAIRE AMATEUR RADIO CLUB
2nd Tuesday - 7:30 PM Eau Claire, Parks & Recreation, 1300 First Ave, Eau Claire, WI 54703. All hams and guests welcome. Wide area coverage repeater KB9RRA 146.910 Mhz. For more info: Jim Staatz KG9MV 715-838-9108 kg9mv@ecol.net

WAUPACA AMATEUR RADIO CLUB
"CQ First Tue." - A social gathering and Dutch treat luncheon at the King's Table in King, WI, on Highway QQ just south of highways 10 and 54 on the west side of Waupaca. Gather at 11:00 - 11:30. Order at noon. Club business transacted.
"CQ Third Fri." A social gathering and Dutch treat dinner, semi-formal, "OM & XYL" at one of the better supper clubs in the area. Check Waupaca 147.390 nets at 8:00 a.m. or 8:50 p.m. for that month's meeting place.

QCWA - WISCONSIN CHAPTER #55
Contact Erwin Froelich, W9RZW, Treasurer, W3449 Badger Road, Pine River WI 54965. For information about meeting dates or joining QCWA Chapter #55. The Wisconsin Chapter holds Spring and Fall dinner meetings

the 9th of that month. This material is to be sent to the Editor.

Where to Send It

Address changes and corrections, and exchange papers should be sent to Ken Ebnetter.
Editorial material, photographs, and feature articles should be sent to Jim Romelfanger.
Inquiries about advertising should be directed to Ken Ebnetter.
Club, swapfest, and Test Point information should be sent to Ken Ebnetter.
Swapfest ADS should be sent to Jim Romelfanger **NO LATER THAN EIGHT WEEKS BEFORE THE EVENT'S DATE.**
Subscriptions should be sent, with check or money order, to Ken Ebnetter.

Conditions for Reprinting or BBS Posting Material from Badger State Smoke Signals

Permission is hereby granted to reprint articles or posting articles on radio or telephone bulletin boards from *Badger State Smoke Signals*, providing credit is given to the original author, publication in which the article first appeared, and to *Badger State Smoke Signals*. **THIS CREDIT IS MANDATORY, AND NO MATERIAL MAY BE PRINTED OR POSTED UNLESS IT IS GIVEN.**

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Editorial Disclaimer

The opinions expressed in editorials, guest editorials, columns, articles, and letters from readers are the opinions of the authors only, and do not, unless otherwise stated, express or imply endorsement by *Badger State Smoke Signals*, or by any other individual or organization.

on the first Saturday of June and October.

RADIO AMATEURS OF WISCONSIN (R.A.W.) OSHKOSH, WI

R.A.W. is a family oriented club, in which most of its activities revolve around family doings and outings. Meetings are on the 3rd saturday of each month at various locations. If you are a Ham or are interested in Ham radio, contact Mark Miller, N9WT, (920) 231-1662 or Jeff Oppermann N9OSB, (920) 233-7961. We are always looking for good people to join us.

The Test Point



Amateur Radio Examination Locations and Schedules in the Wisconsin Area

April 03, 1999	Oshkosh (Omro), WI
April 03, 1999	Racine, WI
April 03, 1999	St. Paul, MN
April 10, 1999	Blaine, MN
April 10, 1999	Eau Claire, WI
April 10, 1999	Madison, WI
April 15, 1999	Apple Valley, MN
April 15, 1999	Milwaukee, WI (BE)
April 17, 1999	Cottage Grove, MN
April 17, 1999	Loves Park, IL
April 17, 1999	Milwaukee, WI (BE)
April 20, 1999	Eden Prairie, MN
April 24, 1999	Bloomington, MN
April 24, 1999	Milwaukee, WI (MRAC)
April 24, 1999	Tomahawk, WI
May 01, 1999	Oshkosh (Omro), WI
May 01, 1999	Racine, WI
May 01, 1999	St. Paul, MN
May 08, 1999	Blaine, MN
May 08, 1999	Madison, WI
May 08, 1999	Onalaska, WI
May 13, 1999	Apple Valley, MN
May 15, 1999	Cottage Grove, MN
May 15, 1999	Loves Park, IL
May 15, 1999	Milwaukee, WI (BE)
May 15, 1999	Sheboygan, WI
May 18, 1999	Eden Prairie, MN
May 22, 1999	Bloomington, MN
May 22, 1999	Oshkosh, WI (R.A.W.)
May 29, 1999	Milwaukee, WI (MRAC)
May 29, 1999	Tomahawk, WI
June 05, 1999	Oshkosh (Omro), WI
June 05, 1999	St. Paul, MN
June 10, 1999	Apple Valley, MN
June 12, 1999	Blaine, MN
June 12, 1999	Madison, WI
June 15, 1999	Eden Prairie, MN
June 16, 1999	Bloomington, MN
June 19, 1999	Cottage Grove, MN
June 19, 1999	Loves Park, IL
June 19, 1999	Milwaukee, WI (BE)
June 26, 1999	Milwaukee, WI (MRAC)
June 26, 1999	Tomahawk, WI
July 03, 1999	Oshkosh (Omro), WI
July 03, 1999	Racine, WI
July 03, 1999	St. Paul, MN
July 08, 1999	Apple Valley, MN
July 10, 1999	Blaine, MN
July 10, 1999	Eau Claire, WI
July 10, 1999	Madison, WI
July 13, 1999	Eden Prairie, MN
July 17, 1999	Cottage Grove, MN
July 17, 1999	Loves Park, IL
July 17, 1999	Milwaukee, WI (BE)
July 20, 1999	Sheboygan, WI
July 24, 1999	Bloomington, MN
July 31, 1999	Milwaukee, WI (MRAC)
July 31, 1999	Tomahawk, WI
August 07, 1999	Oshkosh (Omro), WI
August 07, 1999	Racine, WI
August 07, 1999	St. Paul, MN
August 12, 1999	Apple Valley, MN
August 14, 1999	Blaine, MN
August 14, 1999	Madison, WI
August 17, 1999	Eden Prairie, MN
August 21, 1999	Cottage Grove, MN
August 21, 1999	Loves Park, IL
August 21, 1999	Milwaukee, WI (BE)
August 21, 1999	Oshkosh, WI (R.A.W.)

Badger State Smoke Signals

Amateur Radio Education and Information

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EDITORIAL BOARD: Ken Ebnetter, K9EN; Dave Knaus, WA9POV; Don Evenson, K9JYX; Jim Romelfanger, K9ZZ.

Subscriptions

1 year	(12 issues)	\$13.95
2 years	(24 issues - save \$1.95)	\$25.95
3 years	(36 issues - save \$3.90)	\$37.95

Subscription form is on page 5. Special club package reduced rates are available. For information, contact Ken Ebnetter, K9EN.

When to Send It

The closing date for each issue is the first of the month for the next month's issue. For example, the closing date for the June issue is May 1. The only exception is for participating clubs' minutes. Participating clubs are requested to send their material no later than FIVE DAYS after the club's meeting. For example, if a club meets on the 4th of the month, the material should be sent no later than

August 28, 1999 Bloomington, MN
 August 28, 1999 Milwaukee, WI (MRAC)
 August 28, 1999 Tomahawk, WI
 September 11, 1999 Sheboygan, WI
 September 11, 1999 Onalaska, WI
 October 16, 1999 Oshkosh, WI (R.A.W.)
 November 06, 1999 Menomonie, WI
 November 06, 1999 Onalaska, WI
 November 16, 1999 Sheboygan, WI
 December 18, 1999 Oshkosh, WI (R.A.W.)
 Monthly, 1st Sat. Racine, WI
 (except January, July & August)
 Monthly, 1st Sat. Oshkosh (Omro), WI
 Monthly, 1st Sat. St. Paul, MN
 Monthly, 2nd Thu. Apple Valley, MN
 Monthly, 2nd Sat. Madison, WI
 Monthly, 2nd Sat. Blaine, MN
 Monthly, 3rd Tue. Eden Prairie, MN
 Monthly, 3rd Sat. Milwaukee, WI (BE)
 Monthly, 3rd Sat. Loves Park, IL
 Monthly, 3rd Sat. Cottage Grove, MN
 Monthly, 4th Sat. Bloomington, MN
 Monthly, Last Sat. Milwaukee, WI (MRAC)
 (except December)
 Monthly, Last Sat. Tomahawk, WI
 (January thru October only)
 Quarterly Eau Claire, WI
 (Second Saturday Jan., Apr., &
 Oct.)
 plus annual summer hamfest.)

Many Swapfests/Hamfests offer exam sessions. If not shown above contact the sponsoring club in the Swapfest column on page 2.

The FCC now requires applicants to show their ORIGINAL AMATEUR LICENSE to the VEC. A copy of your license must be attached to your FCC form 610. You will also be required to have a photo ID, or other acceptable identification.

GENERAL RULES FOR MOST EXAMINATIONS:

Be sure to check with sponsors in the event there are changes and/or errors in the dates or information given.

Some examinations require filing an FCC Form 610 and advance registration at least 30 days before the exam date. (Some VECs permit walk-ins. Check with sponsor.)

To register, you must first secure a copy of the current FCC Form 610 and fill it out completely (AND CORRECTLY). Get your form from an FCC Field Office, the ARRL. Send a 32c/ SASE if you request one from the ARRL. In most cases, forms can also be obtained from the sponsoring group.

ARRL/VEC examinations require a check for \$6.45 payable to "ARRL/VEC".

The FCC now requires applicants to show their ORIGINAL AMATEUR LICENSE or CSCE to the VEC. You must also have two good copies of your license or CSCE. A copy of your license or CSCE must be attached to your FCC form 610 and most VEC want a copy for their records. You will also be required to have a photo ID, or other acceptable identification.

Technician class licensees must show proof of testing before March 21, 1987, in order to upgrade to General with a code test only.

Additional information is given below.

For those with internet access, a listing of exam sessions is available from:

<http://www.arrl.org/arrlvec/examsearch.phtml>

By checking this page, a person can find out registered VE sessions anywhere in US and some overseas. You can search by country, state or zip code. The listing is not specific to any particular VEC, it is a master database. (Thanks to KB9EQI for information.)

MILWAUKEE RADIO AMATEURS' CLUB (MRAC/VEC) LAST SATURDAY - MILWAUKEE, WI

LAST SATURDAY DATES: (except December):
 9:00 a.m. to 12:00 noon at Amateur Electronic Supply (AES), 5710 W. Good Hope Rd., Milwaukee, WI. Note: For Additional Information: Call (414) 797-MRAC (Answering Machine), or (414) 797-6722.

Bring along your ORIGINAL license, CSCE (if any) and one (1) good quality photocopy of each, plus two forms of identification, such a driver's license, etc. Also required is \$6.40 for the exam fee. WALK-INS are welcome. To register in advance, use a post card: Print the grade of license you are applying for, your name, address, and telephone number. Send the card to MRAC/VEC, Milwaukee Radio Amateurs Club, PO Box 25707, Milwaukee, WI 53225.

BADGER EXAMINERS (BE) - MILWAUKEE

Badger Examiners group tests at AES (Amateur Electronic Supply) at 60th and Good Hope, every third Saturday MORNING. Exam times are 9:30 a.m. to 12:00 noon, at the old Sterman Printing shop, just 300 feet west of the AES store. Novice to Extra are offered, and all test materials are provided. Fee is \$6.35, and bring your original license, or CSCE if needed. Also available are Commercial license exams GROL (General Radiotelephone license), GMDSS, Telegraph, Etc. Fee is \$35.00. For more information call Gary Sharbuno, WI9M at (414) 355-0237.

MADISON, WI

VE exams are held in Madison every second Saturday morning of the month at 8 a.m. They are held at the

operations building of the Madison Metropolitan Sewerage District at 1610 Moorland Rd. To get there take the Beltline (Hwy 12 & 18) to South Towne Drive. Go south 8/10 mile till South Towne Drive makes a bend and becomes Moorland Rd. and enter at gate.

You should bring a picture ID, your original licence and a copy of your licence. For exams beyond the novice tests, bring a check for \$6.35, made out to the ARRL/VEC. If the special 610 form with the medical exemption is required, contact me beforehand to obtain one. No appointments are necessary to take exams. For further questions, please leave a message on the mailbox or phone me at (608) 832-6631.

Mark Jenks, NZ9B

STEVENS POINT, WI

ARRL Exams in Stevens Point. Time: 0930. Place: A107 Science Building, on campus at UWSP (corner of Fourth and Reserve streets) For more information contact Joe Larson, N9JW, at 715- 344-1182 evenings or email to joel8@bigfoot.com.

RACINE, WISCONSIN - ARRL/VEC

Monthly - first Saturday, except January, July, and August.

Monthly exams are given 9:00 to 11:00 a.m. at the Red Cross Building, 4521 Taylor Avenue, Racine. Walk-ins are permitted.

Talk in on 147.87/27. Inquiries and registrations should be directed to Robert N. Jensen, W0WLN, 5616 Cambridge lane #6, Racine, WI. Telephone (414) 886-8551.

TOMAHAWK, WI

Last Saturday of every month. Jan. thru Oct.

Tomahawk Volunteer Examiners (ARRL/VEC). Tomahawk, WI. No preregistration required, but appointment would be appreciated. Registration at 8:30 a.m. and testings starts at 9:00 a.m. For location or other information, inquire on 145.43 MHz. repeater or contact: Terry Collins, KB9AUP, W6564 Highway 8, Tomahawk, WI 54487. Telephone (715) 453-4633.

APPLETON, WI - ARRL/VEC

MANITOWOC, WI (HAMFEST)

KAUKAUNA, WI (HAMFEST) Conducted by the Fox Cities ARC VE team. All test sessions in Appleton are held at James Madison Jr. High, 2020 S. Carpenter Street. Testing starting at 8 a.m. For Appleton information, contact George R. Croy, W9MDP, 2113 Twin Willows Drive, Appleton, WI 54914. (920) 730-0967. For Manitowoc or Kaukauna information, contact Larry Siebers, KD9IA (920) 759-1167.

OSHKOSH (OMRO)

The Oshkosh VE Team will administer Amateur Radio exams monthly on the first Saturday. Registration begins at 8:30 a.m. and exams will be given from 9 a.m. until noon at the Omro Community Center, 130 W. Larrabee, Omro, WI. Walk-ins welcomed. Bring a good quality photocopy of your original license and any other necessary documents such as a CSCE, etc. The first session will be through W5YI/VEC, and then sessions will alternate between ARRL/VEC and W5YI/VEC. The exam fee is \$6.35. For more information, please call Dick Lemme, K9FA, at (920) 235-0987, e-mail lemme@vbe.com, or write Dick at 826 Jefferson Street, Oshkosh, WI 54901.

OSHKOSH, WI (R.A.W.) - (W5YI/VEC)

February 20, 1999, May 22, 1999, August 21, 1999, October 16, 1999, December 18, 1999. Sponsored by Radio Amateurs of Wisconsin (R.A.W.) Testing sessions at UW Oshkosh, College of Nursing Building, 845 Algoma Blvd., Room 211, Oshkosh, WI. Park free in lot 29 on side of building or in lot 25 behind the building. Registration start at 9 a.m. \$6.35 per test. Bring 2 forms of id etc. Walk-ins are welcome. Contact: Mark Miller, N9WT, (920) 231-1662 or Mike O'Conner, K9IH (920) 231-7093.

EAU CLAIRE, WI

The Eau Claire ARC will hold exam sessions on the second Saturday in the months of January, April, and October, as well as on the date of their annual hamfest during the summer. For more info: Steve Bluem KA9OMY 715-839-6509

SHEBOYGAN, WI

All sessions will be held in the Red Cross building, 2023 Erie Avenue, Sheboygan, WI, in the SCARC meeting room on the lower level of the building. This area is not readily handicapped accessible. In the event there is a candidate who would be affected by this situation, we will accommodate that person in one of the Red Cross conference rooms on the main level of the building which IS handicapped accessible. Pre-registraton is necessary (we don't want get caught sort!) Contact: Art Pahr, K9XJ, N8209 Willow Road, Plymouth, WI 53073-2929. (920) 876-2370. e-mail <k9xj@excel.net>

ONALASKA, WI (ARRL/VEC)

The Riverland Amateur Radio Club will hold test sessions at the Onalaska Public Library, 741 Oak Avenue South. registration begins at 9:00 a.m. Please bring two forms of identification and two copies of all original documents, CSCEs, license, etc. For more information contact: Roger Reader, KA9BKK, 526 13th Ave. N., Onalaska, WI 54650. (608) 783-0723.

MEDFORD, WI (ARRL/VEC)

Taylor County Area AREC.. Registration starts 8:30

a.m., testing starts 9:00 a.m. Location: The conference room in the lower level of the Sheriff's annex to the Taylor County Courthouse, corner of 2nd and Ogden Sts., Medford, WI. Take Ogden St. west off of Hwy. 13 to the courthouse. Park in the lots on the east or south sides of the courthouse or on the street. PLEASE use the entrance on the south side of the courthouse and watch of the signs. Walk-ins welcome. Contact: Tom Hrdina, N9GEN, 2373 Willow Ave., Medford, WI 54451. (715) 748-4054

PEWAUKEE, WI

The location is a little more handicap accessible, room S110 in the back of the science building by the handicap parking entrance. WCTC is on Hwy JJ off Hwy 16 from the East I-94 and Hwy T from West I-94 just north of GE Medical Systems. Tests start at 9:00 AM and registration ends at 10:00 AM. Contact: Al Johnson, AA7CS

HUDSON, WI (ARRL/VEC)

Sponsor: St. Croix Valley AR Testing Col. Time: Call for time and walk-in info, Contact: Gregory Miller (715) 386-9857

Location: St. Croix County Emergency, Government Center by jail, Carmichal Rd. lower level, Hudson, WI 54016. (Information tnx ARRL Web site)

FRIENDSHIP, WI (ARRL/VEC)

Sponsor: Adams County ARC. Location: Adams-Columbia electric Cooperative (Community Room), 410 E. Lake St., Friendship, WI 53934. Contact: Karl Simonson, KB9EQI, (608) 565-6533. kb9eqi@iname.com

CEDARBURG, WI - ORC HAMFEST

EAU CLAIRE, WI - ECARC HAMFEST

GREEN BAY, WI - ARES HAMFEST

HAYWARD, WI - HAYWARD HAMFEST

KAUKAUNA, WI - SWAPFEST

MANITOWOC, WI, LAKESHORE HAMFEST

OAK CREEK, WI - SMARC HAMFEST

RACINE, WI - RACINE HAMFEST

RHINELANDER, WI - NWARC SWAPFEST

ROCKFORD, IL - RARC HAMFEST

ROTHSCHILD, WI - WVRA HAMFEST

SOUTH MILWAUKEE, WI - SMARC

HAMFEST

STEVENS POINT, WI - CWRA SWAPFEST

WAUKESHA, WI - KMRA SWAPFEST

WAUKESHA, WI - MIDWINTER SWAPFEST

DUBUQUE, IA - HAMFEST

See the Swapfest column for additional information and contact persons.

DUBUQUE, IA - ARRL/VEC

Dubuque Hamfest. Contact: Carl Clark, N0KAX, 2145 Delicia Drive, Dubuque, IA 52001. (319) 557-9149.

ROCKFORD/LOVES PARK, IL

Third Saturday of every month.

Northern Illinois Volunteer Examiners (W5YI VEC). Held at North Suburban District Library, 6340 North Second St. (Hwy. 251), Loves Park, IL. 9:00 a.m. to noon. No new applicants after 11:00 a.m. Walk-ins welcome. Contact: Rusty Cordell, WB9QYV, 1823 Hulin St., Rockford, IL 61102-2619. (815) 968-0080. e-mail WB9QYV@aol.com

MINNESOTA TEST INFORMATION

From "The Ground Wave", Saint Paul Radio Club.

Saint Paul Radio Club (SPRC)

Contact: Ed VanCleave, W0VC, (612) 636-0108

Test Site: St. Paul Technical College

235 Marshall Ave.

St Paul, MN

TESTING: First Saturday of the month, 8:30 a.m.

Anoka Amateur Radio Club (AARC)

Contact: Craig Johnson, AA0ZZ (612) 483-3143

Test Site: Blaine City Hall

9150 Central Ave NE

Blaine, MN

TESTING: Second Saturday of the month, 9:00 a.m.

Bloomington Office of Emergency Management

(Bloomington Amateur Radio Club (BARC))

Contact: Dan Royer, KE0OR (612) 888-9756

Test Site: Fire Station No. 1

94th St. & Nicollet Avenue S.

Bloomington, MN

TESTING: Fourth Saturday of the month, 9:00 a.m.

Valley Amateur Radio Club (VARC)

Contact: Bill Martin, A10D (612) 432-0438

Test Site: Hayes Community Center

14601 Hayes Road

Apple Valley, MN

TESTING: Second Thursday of the month 7:00 p.m.

W5YI Group

Contact: Dave Ranney, N0AXL (612) 542-2553

Test Site: Eden Prairie Library

479 Eden Prairie Drive

Eden Prairie, MN

TESTING: Third Tuesday of the month 6:30 p.m.

SE Metro Area Radio Club (SEMARC)

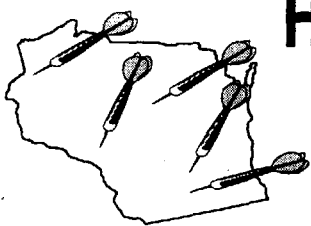
Contact: Dave Harrell, K0BTE (612) 459-8678

Test Site: Cottage Grove fire Station 8641 80th

ST., S

Cottage Grove, MN

TESTING: Third Saturday of the month, 9:00 a.m.



HERE and THERE

Ham radio to return to Great Circus Train

Amateur Radio will be back on board when the Great Circus Train makes its annual run between Baraboo and Milwaukee, Wisconsin, this summer. Last summer, the hams were bumped from the circus train after its sponsor, Circus World Museum, cited "severe space limitations." This year, special event station W9R will operate on HF from aboard the train. Current plans call for operation on 40, 20, and 15-meterSSB.

Members of the West Allis Radio Amateur Club will operate special event station W9C from the show grounds once the train reaches Milwaukee.

Ham radio first rode the rails with the circus train in 1965. ARES members aboard help handle communication along the route and, once in Milwaukee, at the show grounds and for the circus parade.

--thanks to Jim Romelfanger, K9ZZ, in
The ARRL Letter, 3/19/99

APRS emergency call brings help

When Scott Ratchford, KC5JGV, witnessed a bad accident during a snowstorm on Pennsylvania's I-76 recently, he immediately grabbed his cell phone and called 911. When that -- and several other possible combinations -- failed, he tried an emergency call on 2-meters. Again, no luck. Two people were trapped inside an overturned vehicle, and Ratchford was getting desperate. "Here I am in the middle of who knows where, a huge snowstorm, a serious accident, folks needing help, no one answering on .52!" he said in a

interest group. So, I switch the MIC-E to 7, and hit the button." This sent an emergency mike-encoder signal out over the Automatic Position Reporting System.

Ratchford's emergency beacon was spotted by several stations who immediately contacted the Pennsylvania State Police. But the cops "don't do latitude and longitude," said Dan Velez, W4DJV, in Virginia, one of the stations monitoring the call. Clay Owen, AA3JY, in Pennsylvania, had better luck. He also called the state police and was able to give them references to exits and route numbers, thanks to APRS+ and the Delorme Street Atlas. "I also gave them the name of the individual to be contacted, thanks to QRZ built into this program," he reported.

APRS developer Bob Bruninga, WB4APR, was among those noting the emergency call in the Pennsylvania-Maryland-New Jersey area. Bruninga notes that APRS-DOS will display the nearest mile marker on interstates but "apparently I missed I-76 in the database."

Unknown to Ratchford, the message was received and understood. "Little did I know that the APRS message was received, as a trooper had arrived within minutes of my transmission," he said. Only when the trooper asked for him by name as he was about to leave did Ratchford learn that APRS had delivered the message and that someone had called the police. "I left the scene feeling very happy about our hobby and especially our interest in APRS," he said.

The ARRL Letter

BSSS editor's note: The second in a series of articles about APRS and how it works, written by Tom Weeden, WJ9H, is on page 7 of this issue.

FCC'S Riley Hollingsworth visits ARRL HQ

After six months as the FCC's top Amateur Radio enforcer, Riley Hollingsworth, K4ZDH, says he's pleased with the progress he's made and the support he's received from the amateur community. "I thought it would take a year or two years to be at this point," he told ARRL staff members March 17 during a visit to ARRL Headquarters. "We've had some very good enforcement luck."

Amateur Radio enforcement has been "one of the few victories the Commission has been having these days," Hollingsworth said, and he doesn't expect the impending

Silent Keys

James W. Lopas, K9CBU, 1124 Melissa Street Menasha, age 72, died Thursday, March 4, 1999. He was born in Appleton on December 21, 1926, the son of the late Arnold and Germaine (DeGuire) Lopas. He married Dolores Mischler on September 26, 1946, in Little Chute.

Jim was an Amateur Radio enthusiast for 47 years and a member of the Eagle River Wood Ticks Network. He was a musician and played with various orchestras in the area.

Survivors include his wife, Dolores; 3 sons: James A. Lopas, Menasha; Robert P. (Julie) Lopas, Oshkosh; Steven J. Lopas, Menasha; a daughter: Christine L. Lopas, Appleton; 5 grandchildren; 4 great grandchildren; a brother, Bill (Marlene) Lopas, Appleton; a sister-in-law: Lucille (Elmer) Ryba, Little Chute; a nephew: Randy (Susan) Lopas, Menasha; and a niece: Lisa Myron, Indiana. In addition to his parents, he was preceded in death by aunts and uncles.

A memorial fund is being established for the Neenah-Menasha Lions Club, the Winchester-Larsen Lions Club, or the charity of one's choice.

James A. Lopas and Dolores Lopas (KB9IRD)

Robert W. Bukosky, N9AXW, of Milwaukee, died on March 8, 1999, at 81 years of age. Beloved husband of Dolores.

Per Milwaukee Journal Sentinel,
March 10, 1999 issue, via Rich Regent, K9GDF

FCC restructuring -- including creation of a new Enforcement Bureau--to affect its course or momentum. At the same time, Hollingsworth expressed some concern that his efforts not be perceived as the FCC "gone crazy" on Amateur Radio enforcement. "I don't want people saying, 'This is too much government,'" he said.

Hollingsworth said that enthusiasm for amateur enforcement has even spread to FCC field personnel, some of whom are hams and who now ask to be included in amateur cases. He pointed to a recent case of interference to a Pennsylvania repeater system that came out of an investigation at the field-office level.

Calling Amateur Radio "a great natural resource," Hollingsworth said he felt privileged to be in his current enforcement role and was enjoying his work immensely. At this stage in the FCC's latest enforcement initiative, Hollingsworth says he's still making up for the FCC's "long period of neglect" of amateur enforcement. But he said he also looks forward to the day when he's no longer needed. He also said he can appreciate the frustrations of the Amateur Auxiliary during the years of FCC enforcement neglect and he welcomes their cooperation in the future.

In the weeks ahead, Hollingsworth said he hopes to turn his attention to such problems as the incursion of unlicensed operators on 10 meters -- the so-called "freebanders" who often stray onto amateur frequencies -- as well as the improper marketing of equipment to unlicensed individuals and examination fraud cases. He also plans to add some casual monitoring capabilities at his Gettysburg office. "If they know that we're out there bandsurfing, it will help," he said.

Hollingsworth said he's currently working about a month behind in replying and advised those contacting him to use either a letter or e-mail (rholling@fcc.gov) instead of the telephone.

ARRL officials and staff members were quick to praise Hollingsworth's successes as well as his approach, which has been a combination of stern sanctions and "jawboning" with alleged offenders to resolve enforcement issues. As a result, he has not had to designate any amateur cases for hearings. "Few hams have the ability to change the hobby radically," ARRL First Vice President Steve Mendelsohn, W2ML, told Hollingsworth. "We're real fond of you." ARRL Educational Services Manager Rosalie White, WA1STO, called Hollingsworth "a huge breath of fresh air" for ham radio.

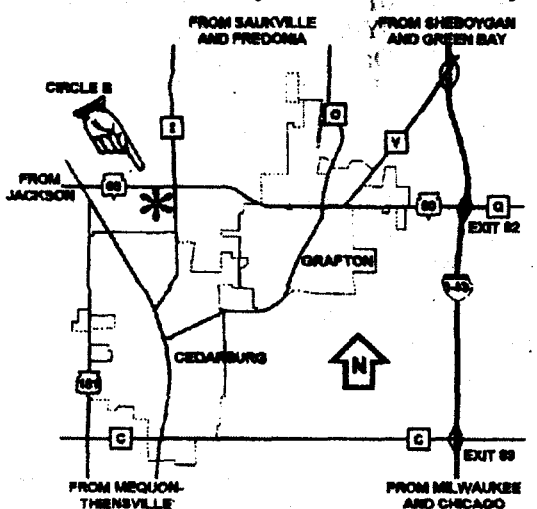
During his visit, Hollingsworth made a quick contact with an acquaintance on 20 meters from W1AW. He also had the rare opportunity to wield the original Wouff

The Ozaukee Radio Club, Inc. presents its 21st Annual
Amateur Radio and Computer

SWAPFEST Cedarburg, WI

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Note: All persons entering the swapfest must have an admission ticket

4-foot tables @ \$5.00 Power requested

Return application if power is not available



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ADDRESS: _____

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SSB

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FOR SALE: Antique receivers. Hallicrafters SX-100 and RME 45 (Radio Manufacturers and Engineers). Both work and look good. Dave at kb9csw@juno.com

Extended

Due to two problems, the entry deadline for the March BSSS quiz has been extended to April 24, 1999.

The first "disorder" was some exceptionally late delivery of some subscribers' copies. After being mailed at the end of February, K9GDF received his copy on March 18. That is a trip of 100 miles, from Portage to Milwaukee.

The second problem some readers may have run into was my own typo in the rules. I listed my own email address incorrectly. It should have read:

smokesigs@baraboo.com

But that is not how it was printed. Of course, it is listed correctly in the masthead on page 2 of every issue, but who reads that?

So, a reprieve. Now, folks, get busy! Grab your March issue, turn to page 13, lick your pencil (but not your calculator or the paper), and enter! The prizes are a \$25.00 MFJ Badger Bucks gift certificate, \$20.00 cash, and a great NASA photo (non-electronic, a REAL picture). It is certainly worth a little effort to enter. Enter by regular or email. My snail address is on page 2. It's in the masthead. So, read it, already!

Editor

Hong and Rettysnitch -- the traditional symbols manufactured and invoked by "The Old Man" during the early years of the hobby to combat poor operating practices. League officials expressed the hope that the experience would provide an additional boost to Hollingsworth's present-day enforcement efforts.

The ARRL Letter

Texas PRB-1 bill update

The Texas amateur antennas bill, HB 1345, has been approved by the Texas House of Representatives. An amendment concerning historical preservation was added to the bill. The amendment would add language stating that the measure would "not prohibit an architectural or historical district established under law from taking any action that the district may take under law." The bill was officially received by the Texas state Senate on March 18. Supporters have been seeking support for the measure in the state Senate. As yet, the bill has no Senate sponsor.

--thanks to Tom Blackwell, N5GAR and Ray Taylor, N5NAV

The ARRL Letter

ZR1AFH and ZS5AKV complete first SUNSAT voice contact

A successful voice contact has been made via the new SUNSAT SO-35 satellite. The new satellite represents a first for South Africa and the African continent. SUNSAT Project Leader Garth Milne, ZR1AFH, and SA-AMSAT President Hans van de Groenendaal, ZS5AKV, completed SUNSAT's first-ever voice contact March 14, according to a report on the AMSAT reflector. The satellite still is a few weeks away from general amateur use, however.

The stations used a VHF uplink and a UHF downlink for the contact. Voice quality was said to be excellent and signals strong for the QSO, even when the satellite approached the horizon. SUNSAT was launched February 23 from California's Vandenberg Air Force base.

"It was rewarding for the first test voice contact to be made by the radio amateurs who have been involved from the outset of the project 10 years ago," said van de Groenendaal, who also serves as IARU Satellite Advisor. "SUNSAT will play an important part in bringing Amateur Radio into the classroom as part of the Amateur Radio in South African Schools (ARISAS) program." ARISAS will use Amateur Radio in the classroom to expand the teaching of science and technology.

Since its launch, SUNSAT has been undergoing extensive testing by the ground control team at the University of Stellenbosch in South Africa. The March 14 voice contact, to test the SUNSAT transponders, was part of the preparations that will continue for several more weeks.

Milne said SUNSAT will provide a boost to South Africa's burgeoning electronics industry. "South Africa has an innovative electronics industry that wishes to benefit from new opportunities," he said. "It also needs competent technically trained people to establish and operate systems." More than 50 students involved in the SUNSAT program have received graduate degrees in engineering.

The SUNSAT package includes digital store-and-forward capability and a voice "parrot"



Wisconsin Governor Tommy G. Thompson, left, shakes hands with Wisconsin Section Emergency Coordinator Stan Kaplan, WB9RQR, at a proclamation signing ceremony in Madison March 19. See page 13 for details. K9ZZ photo

repeater that will be used primarily for educational demonstrations. The unit has two VHF and two UHF transmit-receive systems. In addition to Amateur Radio and school science payloads, SUNSAT carries two NASA experiments and an experimental pushbroom imager capable of taking pictures of Earth. The high-resolution imager, providing 50x50 km coverage, will operate in real time on S band. These images also can be stored in the RAM disk and portions can be downloaded at lower speeds (9600 baud) for retrieval by hams and schools.

SUNSAT ground control expects the satellite's Amateur Radio payloads to be fully commissioned by mid-April. For more information on SUNSAT, visit <http://sunsat.ee.sun.ac.za>

--AMSAT BBS; SUNSAT Web site

The ARRL Letter

Low-frequency experimental license issued

Some US experimental activity is coming to LF! The FCC has granted a one-year experimental license to the Amateur Radio Research and Development Corporation to conduct tests on the frequency 136.75 kHz. Experiments would be carried out from 12 Northern Virginia sites using the call sign WA2XTF. These experiments are to gain low-frequency experience in anticipation that the FCC may allocate a band at 136-kHz to Amateur Radio.

Last October, the ARRL petitioned the FCC to create two amateur LF allocations at 135.7-137.8 kHz and 160-190 kHz. The League asked for a 200 W PEP power limit (no more than 2W EIRP) and requested the new bands be made available to those holding a General class or higher license for CW, SSB, RTTY/data, and image emissions.

Several countries throughout the world already enjoy LF allocations around 136 kHz. These include New

Spectrum Protection Act of 1999 introduced

It's round two in Congress for the Amateur Radio Spectrum Protection Act. At the request of the ARRL, Rep Michael Bilirakis introduced the 1999 version of the proposed legislation, HR 783, on February 23.

The bill is aimed at ensuring the availability of spectrum to Amateur Radio operators. It would protect existing Amateur Radio spectrum against reallocations to or sharing with other services unless the FCC provides "equivalent replacement spectrum" elsewhere. Bilirakis, a Florida Republican, also sponsored last year's measure, which attracted upwards of 83 cosponsors on both sides of the aisle. Rep Frank Pallone Jr, a New Jersey Democrat, is the initial cosponsor of the 1999 bill.

ARRL Legislative and Public Affairs Manager Steve Mansfield, N1MZA, says the 1999 bill "is largely the same as last year's HR 3572." The major difference is that the 1999 version adds "Amateur Satellite Service" frequencies to "Amateur Radio Service" in detailing the frequencies that would be afforded protection under the act.

Specifically, HR 783 would amend the Communications Act to require the FCC to provide "equivalent replacement spectrum" to Amateur Radio and the Amateur Satellite Service in the event of a reallocation of primary amateur allocations, any reduction in secondary amateur allocations, or "additional allocations within such bands that would substantially reduce the utility thereof" to amateurs.

Mansfield said it's too soon to predict how HR 783 will fare in the new Congress, but said the fact that it has been introduced so early in the session "bodes well for our prospects." He said that a number of the cosponsors from last year already have indicated an interest in signing on again, "so I think we'll have a lot of support."

Mansfield also hopes the bill can take advantage of a desire on the part of the House leadership to move a lot of legislation through this year. "I'm hoping our bill will get caught up in their enthusiasm," he said.

A copy of the measure is available via the Thomas Web site, <http://thomas.loc.gov/>

The ARRL Letter

Zealand, Great Britain, the Republic of Ireland, and several European nations.

Emissions authorized for these tests include 173-Hz and 450-Hz bandwidth frequency-shift data and 100-Hz bandwidth CW. The authorized transmitted power is 1 W ERP. The 12 stations will operate experimental transmitters, antennas and receiving systems using digital signal processing techniques.

Participating in the experimental operation are Glenn Baumgartner, KA0ESA; David Borden, K8MMO; Robert Bruhns, WA3WDR; Hal Feinstein, WB3KDU; Terry Fox, WB4JFI; Andre Kesteloot, N4ICK; George Lemaster, WB5OYP; Shannon Mishey, N8TBM; Paul Rinaldo, W4RI; David Rogers, K9RKH; Elton Sanders, WB5MMB; and John Seely, AA4GM. Rinaldo is the ARRL's technical relations manager.

While the list of stations is closed and new transmitting stations cannot be added, others are invited to join the project by listening and reporting results. Reception reports should be sent via e-mail to Andre Kesteloot, N4ICK, n4ick@amrad.org.

Further information concerning these LF experiments will be available in the AMRAD Newsletter mailed bimonthly to AMRAD members and available at <http://www.amrad.org>.

The ARRL Letter

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No. 65: Memory 1 - ROM and RAM

Back in December 1994, number 16 in this series titled "Worrying About Memory" covered the basic differences between storage space (hard drives) and main computer memory (RAM). But today there are so many different kinds of RAM, including different physical kinds, that I thought it might be appropriate to revisit the subject and go into a little more depth. So, here we go.

At the outset, let me state that all computer memory resides in chips, so let us begin by considering just one chip. The BIOS (Basic Input/Output System) chip(s) in your computer contains information about the hardware in your machine and how to "talk" to it to make it do stuff or save information, and how to listen to it when the hardware wants something or wants to transmit information. BIOS chips need to keep their information both when the computer is turned on and even when it is turned off. Therefore, they are designed to keep their information more or less permanently. Hence they are often referred to as non-volatile memory. In the really old days, the information was hard-wired in the chip during manufacture. A little later, some engineers devised a way to electrically "burn" the information in, sort of like blowing a bunch of predetermined fuses in order to create a desired circuit pattern. This device was called the PROM (Programmable Read Only Memory), and was typically "burned" using a 12 volt signal, though the chip was designed to run thereafter at 5 volts, a voltage level which would not destroy the programming. Still later, the process was made reversible. A quartz window in the chip's top made it possible to expose the circuit to ultraviolet light for a few minutes from a special lamp, which erased the memory by photochemically restoring the "blown" fuses that had been programmed in before. Then new instructions could be reprogrammed into the chip again using electrical signals. That process could be repeated many times using the same chip, whenever it was desirable to put new information in the chip. The window was then covered with opaque tape to prevent stray light from erasing the data. You can still find this type of EPROM (Erasable Programmable Read Only Memory) chip around - just look for a long chip with

probably has one. The quartz window is underneath the tape, and it is kind of neat to use a magnifying glass to look directly at the circuit of the chip. That exercise will give you a good feel for what the micro means in microelectronics! Get one to examine at a swapfest. Don't pull the one in your TNC!

More recently, a newer type of chip, the Electrically Erasable Programmable Read Only Memory (EEPROM) has gained very wide use (even your car has one). Also called "Flash Memory", this chip also keeps its information permanently, even when it is running normally in an electrically live circuit. However, special programs can be used to erase and reprogram the chip, again by raising the voltage higher than that normally found in the live circuit. The other day, I upgraded the data in my computer's video card by downloading a special program from the manufacturer over the web, then "flashing" the EEPROM on the card. That updated the card's capabilities and fixed a couple of minor bugs, and I didn't even have to open the case of my computer to do it. All I had to do was run the program, which took less than 10 seconds! That video card is currently showing me these words as I type. Today I flashed the main computer BIOS in exactly the same way.

ROM chips hold information that is more or less permanent - changeable only when you want to periodically upgrade the information as I did with my video card and computer BIOS. The main RAM memory in your computer, however, is another story. The information that is stored there is constantly changing as you use your computer. Indeed, in a Windows machine, the information seems to be constantly changing even when you are not using the computer, so long as the power is on. Win95/98 seems to be constantly doing stuff in the background, without human intervention!

At any rate, this main memory can be thought of as many, many toggle switches being turned on or off constantly in varying patterns as you work. Main memory needs to be changeable, or volatile, because that is its purpose. Furthermore, it needs to be accessed randomly. Non-random access is akin to having to listen to the first four songs on a record or CD-ROM, even when the one you want is the fifth one. Random access permits you to skip directly to song number 5, which you can do on a phonograph record by lifting the arm and putting the needle in the right track. Therefore the main memory in your computer is called RAM (Random Access Memory), or DRAM (Dynamic RAM). It is volatile, indeed, for any information stored there goes "poof" when you turn off the power.

RAM is really important, especially so in newer machines and VERY ESPECIALLY so if you use Windows 95 or 98 (both are memory hogs, and can hardly function without lots of it). How much do you need? What kind do you need. What does the kind you need look like? What do the terms SIMM, DIMM, Fast Page Mode DRAM, EDO RAM, Burst EDO, SDRAM and even RDRAM mean? Next time. Happy computing!

Reprinted, by permission, from the ORC Newsletter, Ozaukee Radio Club, 101 E. Clay Street, Saukville, Wisconsin 53080-1903 (Skip Douglas, KA9DDN, Editor). □

The Year Two Thousand

Continued from front page

about Y2K progress can be found at

Wisconsin Electric Power Company
www.wisconsinelectric.com.

You may obtain a copy of the **Free Consumer Remedies Booklet** from the Federal Emergency Management Act Department by calling 1-888-261-6214.

Other Wisconsin electric utilities' Web addresses include:

Madison Gas and Electric:
www.mge.com

Alliant (formerly Wisconsin Power and Light):
www.alliant-energy.com

Northern States Power:
www.nspco.com

Wisconsin Public Service Corporation:
www.wpsr.com/y2000.html or
www.wpsc.wpsr.com

The Wisconsin Department of Emergency Management (DEM) in Madison has a Y2K section on its Web site:

<http://badger.state.wi.us/agencies/dma/wem/index.htm>

Approximately 670 domestic airports were reported by the Senate's Y2K Committee to remain at high risk for problems. International airports and air-traffic controls could be worse, especially Africa, South America and Eastern Europe, with at least some delays or cancellations in flights. In Milwaukee, Express has spent nearly three million dollars; United costs are 900 thousand dollars; and Mitchell Field has spent hundreds of thousands on Y2K security, fire alarms systems and deicing systems.

Ground and sea transit, railroads, shipping industries and trade commerce might be disrupted. Food and health care supplies could be delayed, even mundane tasks like transporting coal from mines to power plants is not

certain. A recent report shows the Department of Transportation is not ready for Y2K. This means locally that besides having some traffic lights not working, subways out east could stop and strand commuters. United States vendors with foreign suppliers might discover a slack supply of merchandise as late as April. Experts don't know which foreign countries will have problems with Y2K, many countries simply aren't working on readiness. For some people that may mean they'll just have to wear their old imported sweater another year!

The three major U.S. automobile makers say they are ready for Y2K, since the dashboard maintenance warnings are based on engine start-ups rather than dates from chips. In the offices, the older fax machines may print the wrong date but will still work. Some sophisticated security systems will need upgrading as will elevator controls.

We can think back 1000 years ago to people worrying about Y1K problems. That's when there was a change from a three-digit to a four-digit year, creating havoc for stone masons who had to carve an extra numeral in all dates on tombstones, cornerstones and monuments. The scribes had to write more numbers and adjust columns for birth and death records.

Long ago, my sixth grade teacher wrote the year 2000 on the blackboard. He told our class that some of us would be alive to see that year. It was an eerie prophecy, a time capsule in our heads, of an unknown future. Now it is close.

The media calmly tells us to prepare for Y2K as if it were a winter storm or as an inconvenience. To have some extra water, groceries in case of food shortages, flashlight with extra batteries, radio, TV, cash, and gas in our cars. Suddenly, there is a frenzy by the public to buy electrical backup generators, batteries, flashlights, firewood and candles.

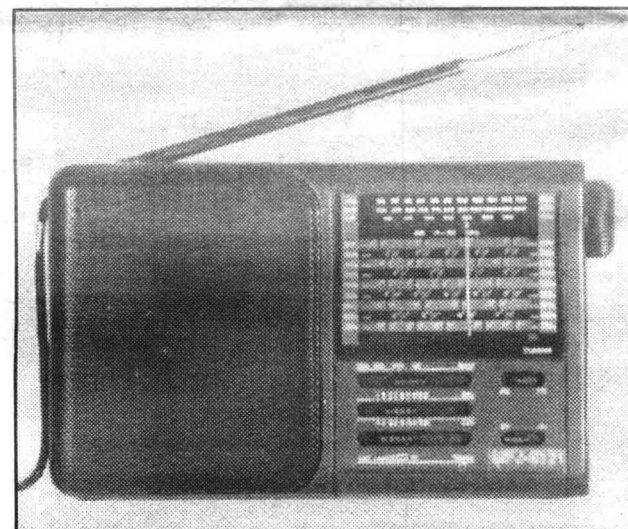
The average citizen of a Third World Country probably doesn't even notice our concerns and fears of electronic malfunctions. They will keep busy just struggling to find food and maintain their shelters.

So: Let's keep Y2K in perspective as we too continue into the new year. □

As Y2K comes closer, more will be known about what is currently uncertain or unknown. We will try to print a

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MFJ-8121 21 Band World Receiver



The new MFJ-8121 World Band Receiver (\$39.95) lets you travel the world band airwaves, anywhere, anyplace, any time. You can rely on the programming of international broadcasters for news, inspiration and excitement. Hundreds of stations are on the air (many in English) and offer programming driven by excellence - not ratings.

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Continued on page 7

followup to Rich's story as he continues to get updated information, hopefully in late summer or early autumn.

Do remember that should any communications outages of any size do happen, radio amateurs will probably be called to help. If this happens, hams with at least some experience handling messages will be the most useful. Those with no experience will be welcome, of course, and likely needed, but "on the job training" in a crunch situation isn't a good idea. At the very least, being active in Skywarn provides a bit of structured communications background. If one wishes to do a bit more than that, even better. Contact SEC Stan Kaplan, WB9RQR, for the name and call of the Emergency Coordinator for your area or county. Stan's many addresses are in the heading of his computer column on this page. You may also wish to make contact with state DEM radio officer Mack Brophy, N9NTB. He can be reached through the DEM Web address in this story.

Mary Langer, KB9GOY; John Meyer, N29Z; and Mack Brophy, N9NTB, contributed additional information for this story. □

The Automatic Position Reporting System (APRS)

By Tom Weeden, WJ9H

#2 - Getting Started

Last month we talked about the APRS concept and how it is revitalizing VHF packet radio. This month we'll get the DOS version of APRS up and running. If you have a DOS machine, 8088 or better, plus a CGA or better monitor, already running your favorite terminal program for packet, you're all set. As of this writing, the current version of APRS is 8.30. You can download it from the TAPR site by going to:

<ftp://tapr.org/aprssig/dosstuff/APRSdos>
and downloading: APRS830.ZIP

While you're at the TAPR site, also go to the following directory:

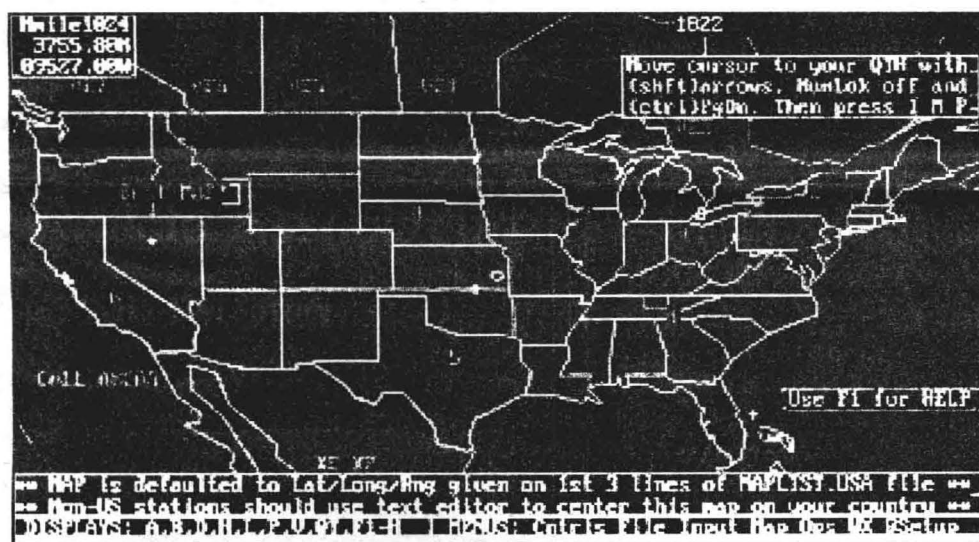
<ftp://tapr.org/aprssig/maps/PCMaps>
and download the map file: WIMAPS03.ZIP

Now, create a new directory called \APRS and put the two zip files into it. UnZIP the files with the PKUNZIP utility:

PKUNZIP -D APRS830.ZIP
PKUNZIP -D WIMAPS03.ZIP

Make sure you use the "-D" switch which places all the files in their proper subdirectories. (If you don't have PKUNZIP.EXE to do the unzip, try the www.pkware.com web site and download PKZIP 2.04g for DOS.)

Are you ready to start? Set up your radio to 144.390 MHz, turn on your TNC and make sure it's connected to your computer. From the \APRS directory, type APRS830 and the program will start. You'll be prompted for several pieces of information. First is your call. Next, which COM port is your TNC on? What is its baud rate? (Enter the baud rate your computer uses to talk to the TNC.) Will you be on HF or VHF? Answer VHF for now unless there is no activity in your area. Then answer HF only if you have HF packet capability. What type of TNC are you running? Pick the closest from the list by typing the first letter of its name. Is your PC clock on local time or UTC? Then your UTC offset: if you're in Wisconsin, it's -6 unless we're on Daylight Savings Time, then enter -5. Will your other COM port be used? Right now, answer None.



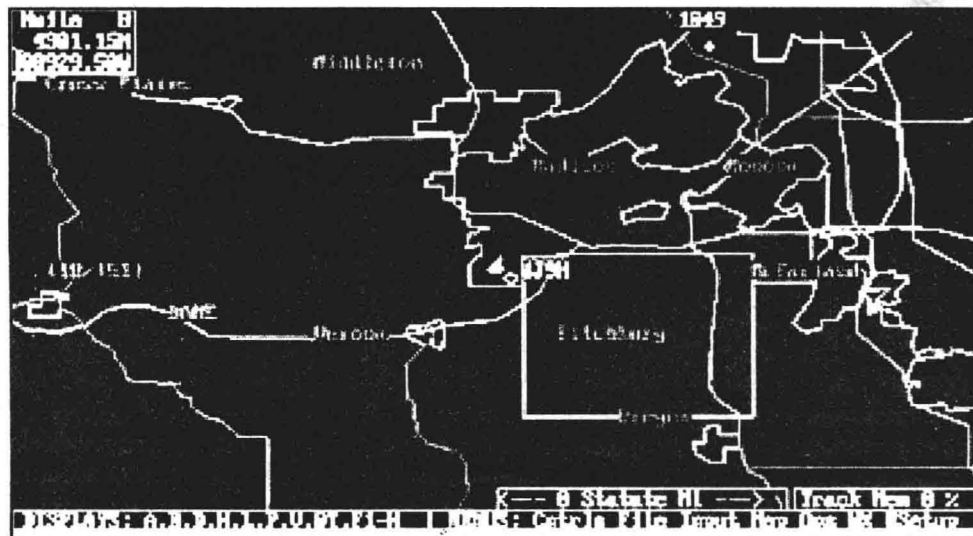
Now you should have a simple map of the USA with a cursor in the middle. Let's go over some of the display screens before we zoom into your location.

- * P shows the POSITION screen. This is a list of all stations' position packets.
- * L shows the LIST of status packets which are non-position packets.
- * D shows the DIGIPEATER list, the paths of all stations heard.
- * B shows any current BULLETINS that stations may have sent.
- * H shows the HEARD page, a list of hourly statistics from each station.
- * A shows the list of ALL packets.
- * F1 gives HELP! Press F1 then H for a quick summary of one-letter commands. F1 then F gives a list of README-type files that you can read for more detail.

- * Pressing the HOME key will redraw the current map centered on the cursor location.
- * Pressing the PAGE UP key will zoom out by a factor of 2 centered on the cursor location; PAGE DOWN will zoom in by a factor of 2.
- * Q is for QUIT.

Let's see if we can find your location. Press SPACE to get back to the map page (if you left it). Now press M (MAPS), C (CONFIG), C (CHANGE MAPLIST), then enter WI for the WISCONSIN list of maps. Using the arrow keys, position the cursor over Wisconsin and press PAGE DOWN. As you zoom into your location, more detailed maps may open up if they are available for your area. Keep refining your position and pressing PAGE DOWN until you are satisfied that you have found your location.

Now press I (INPUT), M (MYDATA), P (POSITION). You will see a latitude value which you can accept by pressing ENTER, or you may enter your own latitude value. The same will happen with the longitude. Next you'll be prompted for a symbol letter. Press Q for QTH and then pick the number corresponding to your antenna type. Now, what's your course and speed? Your house is stationary, so press ENTER for the values of 000 and 000. Next, you can enter some brief text such as "Tom in Madison" or similar. And finally, you'll be asked for a date/time stamp; press ENTER for NOW. Now press Y if all your data is correct or N to start over. Pressing Y formats the position packet and tells the TNC to send it. Congratulations! You're on APRS!



There is more you can add to your position and status packets. First is Power-Height-Gain. Press I (INPUT), P (PWR-HGT-GAIN) and follow the prompts. You can also enter a status packet by pressing I (INPUT), M (MYDATA), S (STATUS). If you don't enter a status line, the L-list will show "NONE" for your status.

The timers in the upper right hand corner of your screen will tell you how long until the Position and Status packets will be sent again. Notice that if your information doesn't change, the interval between packets continues to increase so as to not "clog" the frequency.

As you see stations begin to plot on your map and add to your station lists, you'll see who is within range and who you could use as digipeaters to get out farther. APRS uses generic aliases of RELAY and WIDE. If you see a WIDE station within range, use the U (UNPROTO) command to specify a path. At first, try RELAY, WIDE or WIDE, WIDE to see which works best. Or specify the callsign of a nearby station and add WIDE (such as K9XYZ, WIDE).

What if there are no VHF stations within range on APRS? Try HF! The most popular HF frequency is 10.151 MHz. Wait a minute: that's out of band! Well, not quite. The dial frequency is 10.151, but the mode is lower sideband, putting the MARK tone at 10.1492 MHz, just inside the band! There are also some 40- and 20- meter frequencies to try. Use the F1-F command to read the HF.TXT file for more information.

In fact, feel free to use F1-F to peruse the various help files as you play with APRS.

Now, for you Windows and Mac users. There are versions for you to try. I won't be going into them in detail, but here are the sites to get the software.

WinAPRS Version 2.2.5

<< <ftp://msprout.rutgers.edu/pub/hamradio/APRS/WinAPRS> >>

MacAPRS version 3.2.5

68K and PPC versions

<< <ftp://msprout.rutgers.edu/pub/hamradio/APRS/MacAPRS> >>

Next month, we'll discuss in more detail APRS digipeater paths and how to send messages.

NEW PRODUCTS

Continued from page 6

from Paris, soccer matches from Germany, Rugby from New Zealand, all news talk shows from Dublin, all sports talk, and more! Start your cultural adventure today and catch exotic programming that'll entertain you, educate you, and rejuvenate you.

It's not like regular AM/FM radio. Short wave radio offers a healthy change of pace from the same old boring AM/FM stations offering the same old boring information and music. AM/FM radio stations also fade out after only a few miles; you can enjoy short wave stations from all over the world throughout an entire trip. You'll always find informative, interesting programming that you can listen to.

It's perfect for families who want to offer their children something more than just unintelligent television and boring AM/FM radio programming. Your kids will benefit from learning about the culture of other nations and the excitement and of electronics and world band

radio.

The MFJ-8121 operates FM, medium wave, long wave and short wave bands from 1 to 18 MHz. It has excellent sensitivity and selectivity. A built-in telescopic antenna (6 inches retracted, 26 inches fully extended) and a Sony integrated circuit design from Japan brings in stations loud and clear.

A multi-colored tuning dial makes it easy to tune to your favorite station. An LED tuning indicator is brightly lit red when your desired station is tuned in. The radio has a smooth tuning bandswitch that makes it easy to glide across the bands looking for some new exotic stations. Has AM/FM switch.

A detailed world time zone and frequency charts are permanently silk screened on the back panel. This keeps you informed for quick band condition changes and lets you decide where to explore next.

A large built-in 3-inch speaker gives you plenty of clear, room-filling volume. The internal speaker is automatically disconnected when you use your earphones for private listening.

The radio operates on 6 VDC or from four easy-to-install double A batteries (not included). The case is high-impact plastic.

It's compact, 4 1/4" x 7 1/4" x 1 1/4" inches, and a handy

wrist wrap-around carrying handle lets you take it with you anywhere to use any time. Going to the park, camping, hiking, in the car, on vacation, in your hotel room, on the beach, etc. It's great entertainment to sit back and relax to.

The MFJ-8121 World Band Receiver is protected by MFJ's famous No Matter What™ one year limited warranty. MFJ will repair or replace (at our option) your MFJ-8121 for one full year.

MFJ Enterprises

E-mail address update in May

The next update to the Wisconsin radio amateurs and clubs e-mail and URL address list will be printed in the May (next) issue of B999. If you have an address or URL to add or change, please send it to:

wa9pov@execpc.com

icebreaker "Glacier": Part 4

By Sherm Carr, W9NGT

This is the fourth part in a series of the personal log of Sherm Carr, W9NGT, who sailed from Australia to Oregon aboard the Coast Guard's icebreaker "Glacier". His son, Mike, was posted to that ship, and Sherm and son sailed together on her voyage to her decommissioning in Astoria, Oregon.

2200 - still 21 March

Settled in, plot done, ice and Coke, and visit time. We are underway 8 1/2 days now, and the engines rumble on. It is cool below, and 88 degrees on deck. Son Mike and I are so busy during the day, that often I don't see him until "settle in" time. We both look forward to our almost nightly visits.

1045 - 22 March

Break time on the crew's mess deck with coffee and snacks. Missed breakfast due to hamshack activity. Today is the day. Will skip lunch and watch the SATNAV countdown. Propagation will not be solid until after 1300 anyway, so we can goof off for several hours. Lots of company to visit with!

1345 - still 22 March

Keith Johnson missed it by only four seconds! Mike took pictures as SATNAV clicked off the last digits to zero, and started adding digits on the other side of the line. SATNAV went from South and switched to North four seconds after it went from 179.999 East to 179.999 West, about four seconds after sidereal noon. Actually, the four second error is mostly academic, because SATNAV does not read out zero, and the readout is updated every five seconds. Mike got the four second gap with a stop watch. *It was yesterday, today and tomorrow, and winter and spring, all in four seconds!* Per the computer, Glacier crossed the line within about 160 feet. Keith Johnson made the "ho hum" sign, but I think he was as excited as anyone else. When advised of the crossing, Honolulu radioed "Well done, Glacier!" Well done indeed! I can't wait to brag about this on the Maritime Net!

1800 - still 22 March

Hamshack operation is routine, and going well. I dug out about 135 Glacier QSL cards, and will take them home with me for mailing to all those stalwarts who stayed with us so long. It will be a chore, but a pleasant one. I hope I have enough. These cards will be a fine way to remember a fine ship. I spoke to son Mike about the possibility of a letter of commendation to go with the cards, and he said he would look into it. The support we have enjoyed from the Maritime Nets, and all our stateside stations has far exceeded expectations. It has been a superb team effort. I am still bothered by the four hour propagation window discrepancy, but I guess it doesn't matter.

One of the microphones failed today. It will have to be fixed, but we'll let it go for now.

Started up the ladder from the wardroom after breakfast, and had to vault over the chain railing when the ship took a good starboard roll. Moving about a rolling ship is not quite automatic yet. I must remind myself often to be more alert. Didn't spill my coffee though. I'm glad no one saw that gymnastic maneuver.

1830 - 23 March

Pete opened up the shack and was going great when I arrived. He does his Aviation Detachment work at night so he can be in the shack. He is usually there and has the gear all warmed up when I arrive. After two or three days I turned him loose, so he's usually at it, even before propagation is in solid. He has been a tremendous asset.

With the extremely low noise level, atmospheric noise is all we hear. It builds in the morning, but diminishes dramatically part way through our operating period. Some days it is non-existent. Rudy, the OPS radioman, popped in and told us to keep going if we wanted to, as he had no traffic pending.

We are hearing and working stations farther East now. They've been waiting to get a piece of the action. We welcome this because we would like to ease the load on the West Coast people. The service we get is absolutely superb. Our window goes through the supper hour, and they set up alternates while others go eat. A real fun operation!

If we were not in a very important activity, we could set records for contacts. Many Amateurs are anxious to contact Glacier, but most are understanding and good sports. We have lost very little patch time, even with some pileups. We still average ten patches an hour, and make sure each customer gets his or her full five minutes. This would not be possible without top notch operators stateside. Propagation failed at about 1730, and we logged 56 patches, a record.

We are now known as "The Glacier Telephone Company." The Kenwood gear got a real workout today!

An important item: When we crossed the equator, there were technically two 22 Marches. However, as I understand, 30 January was lost down in the ice when Glacier crossed the Dateline going West. Because many birthdays were missed, Captain Hammond has decided to repossess 30 January. So, there will be 25 March, 30 January, and then 26 March. This juggling of the calendar is completely logical when it is understood that the Captain is the BOSS. If he decides to have 30 January in March, 30 January it will be, and all birthdays will be duly observed and celebrated. As I may have mentioned before, Glacier is a unique ship!

I asked son Mike what would happen if 31 December had been missed. He "opined" that it would be the same: only the type and scope of the celebration would be different. I "opined" that this is a very unique crew. He said that I fit right in. It was a compliment -- I think.

1830 - 24 March

Time flies by. With hamshack operations and paperwork, it is often an eight hour plus day. We had to take turns with OPS radio today and didn't set any records. Atmospheric noise has not been a serious problem, but it is today. We ran



through a number of rain squalls, and precipitation static squeals for 10 -- 15 minutes at a time, virtually shutting us down for a while. Glacier's superstructure and antennas are the only objects sticking up in the whole ocean, and discharges from the corona spikes can be horrendous.

Except for squalls, it is warm and breezy, and we are running almost head up to the seas, which are mostly ground swells of about 12 feet. The ship rides up and over them, mostly, but every third or fourth swell arrives at the wrong time, and Glacier simply bores through it. Great spumes of spray are thrown upward and outward from the bow, and geysers shoot up through the hawse pipes. It's fun to watch.

It doesn't seem that long, but we've been underway for eleven days. Glacier rumbles steadily on, at 13.8 knots.

1730 - 25 March

A very productive day. With the hamshack lately, there is no in between. Everything either works great, or not at all. But, with a pipeline to the States, all our customers are happy. They don't worry about the few times that communications fail. We receive many compliments, which we promptly pass on to the Net, and our patch stations.

We have to remind our customers some times that they are using the world's largest party line when their conversations get more than somewhat personal. I doubt that they care much though.

Another time zone change today, and our window moves up an hour. Sidereal noon is only six minutes from 1200 ship time, so with the next change our operating time will move up two hours. Our propagation window is remarkably consistent at about four hours.

2300 - still 25 March

Just came down from the bridge, and will finish today's notes. The stars tonight are absolutely brilliant. Located Polaris, almost on the horizon, the Big Dipper, Orion, the Pleiades, and more. The SATNAV will be taped up for a day or two, to practice navigation the old fashioned way.

The star charts are out, and everyone on the bridge was busy locating stars. No strain or pain. They take it all in stride.

We will be at the dock in Kahalui Harbor, in Maui, at 0800 Saturday. There will be two Wednesdays this week, and then the U.S. calendar will agree with Glacier's. 30 January will be repossessed tomorrow, that got lost down in the Antarctic ice.

I watched one of the bakers decorating a huge birthday cake, while the ship was rolling up to 15 degrees. It was fascinating. Not a frill of icing was out of place. Nothing, absolutely nothing about this ship surprises me anymore. Tomorrow will be designated "Holiday Routine," with a cookout on the flight deck.

Due to fuel consumption, the ship rides higher, and rolls more since we left Sydney. The last refueling was at Punta Arenas, back in February. I am used to the motion now, and seldom think of it. I have had to use the rolled up blanket trick to stay in my bunk, but have no trouble sleeping. Taking a shower involves some tricky gymnastics, and staying in front of a mirror while shaving requires alternate knee bends. Hand rails come in handy when one starts to slide.

1530 - 30 January

As mentioned, today is holiday routine. Was running patches by 1300 ship's time after explaining about 30 January to the Maritime Net, much to their delight. I had to desert Pete, because today's cookout is "hosted" by the "Over The Hill Gang." That's everyone over 40. That's me, George, Tim, the XO, (Executive Officer) Captain Hammond, son Mike, Chief Mulford, and others. George is in charge, because he is the oldest.

I can tell by the ship's PA system that Pete is really going at it. Phone patch totals are really mounting.

1930 - still 30 January

The cookout was a huge success. Captain Hammond, George and Mike were chief cooks and the rest of us dished it out, with steaks, burgers, chicken, salad, fixings, and the aforementioned birthday cake.

Chief Mulford relieved me so I could relieve Pete to go eat. Just about then, we came back to good old 046 from the easy riding "cookout" course, and Glacier began to roll again.

The cookout course speed was only 2 or 3 knots for skeet shooting off the flight deck, and deep sea fishing off the fantail. For several hours, Glacier was the world's largest trolling vessel! While Pete was eating, propagation folded, and we closed shop for the day.

I have to mention the volley ball game that goes on almost every day on the flight deck. The ball is tethered to the top center of the net, to keep it from going overboard, and the flight safety nets are up, to keep the players from going overboard. A volley ball game with the ship rolling up to 10 degrees is fun to watch.

Another time zone change tonight, and our operating schedule moves up an hour. We'll take five hours tomorrow to cover the overlap, which occurs every third

The second microphone got fixed, courtesy of the Electronics Department. Another example of sterling support! I was uneasy with just one. A second failure would hold up a schedule that just cannot be delayed. We now can notice the S meter swinging when the ship rolls, but the fade margin is far wider than the swing, so we are in good shape. Atmospheric noise is quite low, and rain squalls don't generate the horrendous precipitation static of a few days ago.

2230 - still 30 January

Settled in, ice and Coke, plot made, and all is quiet except for the pleasant rumble of the engines. Down here, closer to the roll axis, the ship's motion is easier. It is most enjoyable to relax after the day's almost constant activity. This is a busy ship!

From doppling along at 2 or 3 knots for the fishermen and the cookout, we got off course, so we're on 056, which puts us right in the ground swell trough, with a 20 degree roll now and then. No problem, but chairs slide around a bit. We are bombing along at 15.6 knots to get back on schedule, with six engines on the line at some 13000 horses.

1400 - 26 March

Up on time this morning. The Engineering Officer gave us some figures to play with, and we computed the fuel consumption mileage at .03333 mile per gallon, or about 30 gallons per mile, at our present speed. Filling stations are a long way apart, but not to worry. With tanks topped off, Glacier stores 1.2 million gallons of fuel. When we arrive in Portland, there will be some 285,000 gallons left, so the gage is far from on "E" yet.

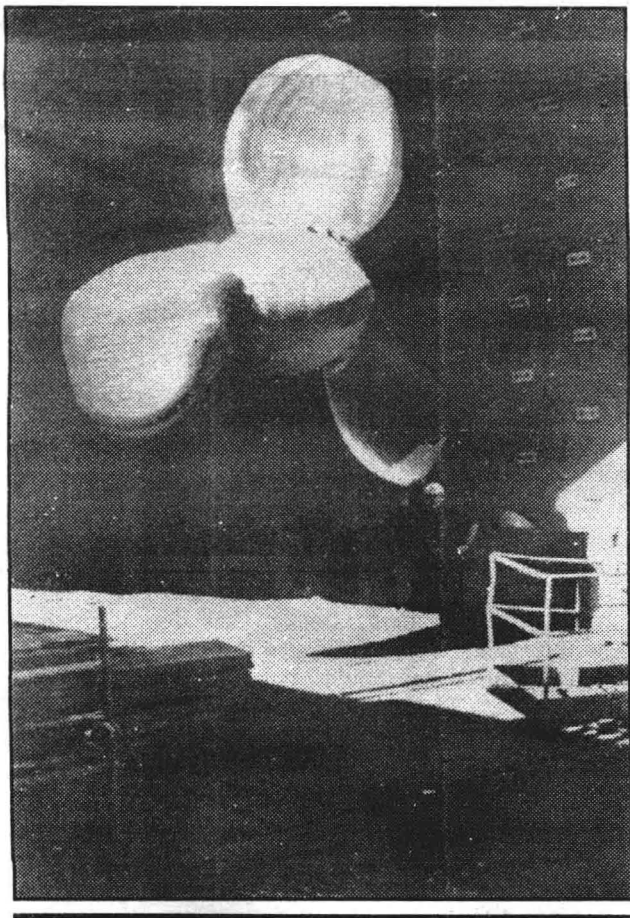
We are on Hawaii time now, and two hours from the West Coast. Patches are easier, at more convenient times. Back a week or so, we were explaining why we had to get people out of bed, and no doubt, scared some.

I toured some today, and got a good look at the huge hydraulic steering engine, controlled either manually or by autopilot. Son Mike tells me it weighs some 30 tons, and the rudder itself another 21 tons. The word 'huge' is an apt term.

Today, son Mike showed me the "Aloft Conn," an enclosed compartment high up on the mainmast. It is fitted with all necessary controls for maneuvering the ship. Purpose: At this height, about 80 feet above the water, 'rifts' and 'leads' can be spotted, to make ice breaking easier. It is reached via a ladder up the inside of the mainmast, which is about 4 feet wide at the base, and tapers to about 3 feet at the hatch door to the Aloft Conn. The main yardarm spar is just above. This facility is used mainly for ice breaking. The ship's motion is greatly exaggerated up here, and we didn't stay long.

Part 5 next month!

Pictured below is Glacier's "screw". That's marine talk for propeller, of course.



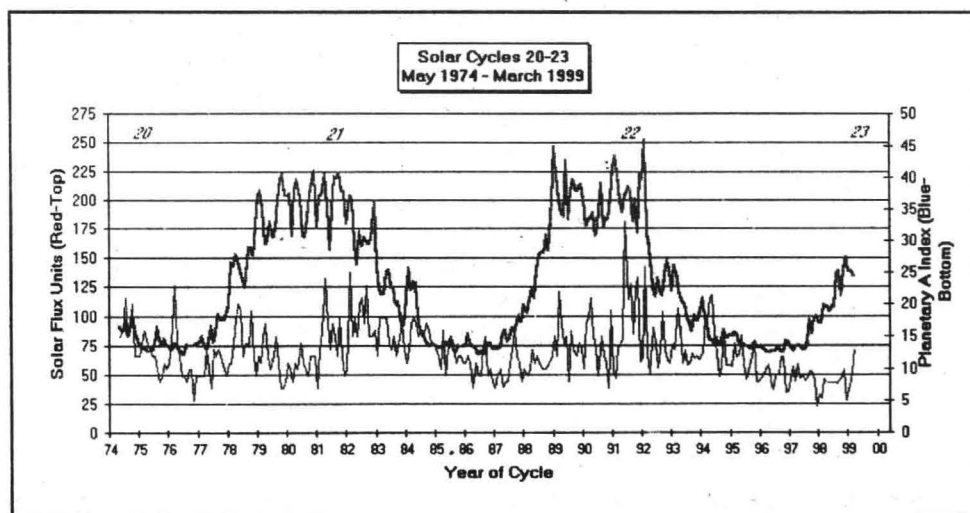
SSB
SELL SWAP BUY

OUR WANT ADS GET RESULTS

FOR SALE: Heathkit "Twoer" (Benton Harbor Lunchbox) 2 meter AM transceiver, \$30.00. Yaesu FT101ZD MK2 transceiver, receiver OK, transmitter needs minor work, \$200.00. Yaesu FV101Z external VFO with 6 channel capacity, \$125.00. VIC-20 computer with tape drive, computer needs work, \$10.00. Tandy TRS-80 computer and monitor, computer needs work, \$15.00. Muffin fans: 2 - 3" fans, \$5.00 each. 3 - 5" fans, \$10.00 each. Big assortment of tubes, call for type and price. 50 new BNC male crimp-on connectors, \$1.00 each. 7 new BNC T-connectors (female ends, male middle), \$1.50 each. 7 capacitors, 630 MFD at 450 VDC, \$1.00 each. Contact Larry Guthu, WB9ICH, 706 West Jennings, New London, WI 54961. (920) 982-3684. □

By Woody Minar, K9EF

The stock market is up and is reaching new territory every day, not unlike Solar Cycle 23. Will Cycle 23 see a correction; predictably not for a long time. Let's compare where we are today to the same period of time in Cycles 21 (1979) and 22 (1988). It takes 2-3 years from the time a cycle begins it's upward climb to the time it reaches the first major peak. We are nearing the completion of the 2nd year of Cycle 23. See the accompanying chart for pictorial details.



As each cycle climbs during this 2-3 year period, there is a slight drop in good propagation, a resting period, before it climbs again to the summit. This period generally lasts 3-6 months. We are in the 4th month of this dip.

The remainder of the climb to the summit, after this dip, takes 2-6 months. If Cycle 23 reacts like other cycles, I would expect the summit to be reached around August 1999. This peak of excellent propagation generally lasts 3-1/2 to 4 years before the 4-5 year decay of the cycle begins. Hence, excellent propagation is expected from about August 1999 through Spring 2003.

Numerically, the above means that the bottom of the solar cycle has an average 2800 MHz Solar Flux of about 70-75. The rise, with the temporary rest and dip which we are seeing now, is about 125-150 Solar Flux Units (SFU). The peak periods of the cycle oscillate between 170 and 225 SFU; Cycle 23 climbed to more than 250 SFU. If you think propagation is good now, just wait another six months!

The Solar Flux and Planetary Index numbers are rather unpredictable at this time. Taking my best shot, here are my predictions for good and bad propagation (give or take a day): The best times should occur March 28-29, April 5-6, 13-14, 21-22, and every seven days thereafter. Poor propagation should be April 1-2, 9-10, 17-18, 25-16, etc. However, during solar cycle peaks, any time is a good time to be on the air! Good luck.

73, Woody, K9EF. □

Lakeshore Hamfest

Electronics & Computer Swapfest Manitowoc County Expo

Intersection of Hwys 42-151 and I-43 on County Hwy R (Follow signs to Expo Center)

Saturday A.M., May 8, 1999

Doors open at 8 a.m.

Friday night set-up for vendors till 9:00 p.m.

or Saturday morning beginning 6:00 a.m.

Accommodations for vendor drive-ins

FCC amateur exams (see below)

For more information, call

RED (920)-684-3733 or

Fred (920)-682-9312

Call - in repeater frequencies

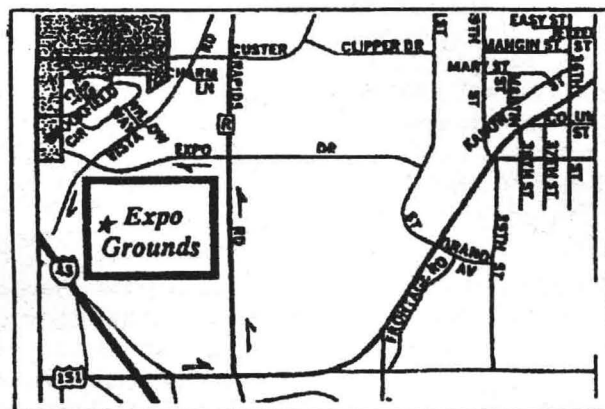
146.61-

FOOD - DOOR PRIZES - BEVERAGES

Hamfest Camping Available
Contact
Manitowoc County Expo Center
920-683-4378

5201 Vista Rd.

Manitowoc, WI



Send reservations to:
Mancorad Radio Club
P.O. Box 204
Manitowoc, WI 54221-0204

Please send
a
S.A.S.F.

Name: _____

Street: _____

City: _____ State _____ Zip _____

___ Advance Admissions \$3.00 each _____

___ Reserved 8' Tables \$6.00 each _____

___ Electric Outlets \$5.00 each _____

TOTAL _____

Admission \$4.00 at the door

FCC Exams (all classes)
Silver Lake College (Hwy 151 west)
Test Registration closes at 9:00 a.m.

Please Send a S.A.S.F.

PARTICIPATING CLUBS AND ORGANIZATIONS

Mancorad Radio Club

Mary Langer, KB9GOY,
Secretary

P.O. Box 204 • Manitowoc, WI
54221-0204



2-Meter Repeater: 146.01 Input/146.61 Output

MANCORAD MINUTES March 10, 1999

President Fred, W6BSF, called to order the monthly meeting of ManCoRad at 7:35 p.m. Introductions were made all around.

The minutes of the February meeting were approved as published in the "Badger State Smoke Signals".

Roger, W9NPX, gave the treasurer's report and was approved as read. A motion was made by Dan, N9FVZ, and seconded by Theresa, KB9KXE, to accept.

OLD BUSINESS

Fred, W6BSF, read a thank you from Mike, KB9ALK, and his wife for the plant we sent. Mike is coming along real well according to Janice, N9IQZ, but still has to go for therapy. We wish him well.

The National Weather Service out of Green Bay will be putting on a weather spotting seminar on April 8, 1999 at 7:00 at the Manitowoc County Sheriff Dept. It will be a 1 1/2 hour program. Fred reserved 15 chairs so if you are interested in going please let Fred, W6BSF, know.

Again, Sheboygan has invited us to join them for Field Day the last (full) weekend in June. If you are interested contact Fred, W6BSF.

The new QSL cards for the Cobia event are in. They look real sharp. The event will be April 24 and 25 from about 9:00 a.m. to 3:00 p.m. aboard the Cobia located in Manitowoc. We will have two stations set up for sure. Please participate one of these days. Contact Fred, W6BSF, or Eric, AF9J.

The Kewaunee Nuclear Plant drill will be coming up on October 5. Please mark your calendar.

The hamfest is coming along real well. It will be May 8 at Manitowoc County Expo. All the mailings are out and prizes are starting to come in very well. We are trying to get a banquet together for May 8 in the evening after the hamfest. If you are interested in attending contact W6BSF. We will possibly go and reserve some tables if we have an idea how many will attend. It will be at the Fawn.

Clubroom clean-up at city hall will be Saturday, April 3 at 9:00. Please come if you are able.

NEW BUSINESS

April 9 and 10 AES will hold an open house. There will be seminars and vendors set up.

Fred, W6BSF, passed around the QSL card he received from T88II from the island of Palau. Ron, WS9X, suggested having John, NZ9Z, show his slides from his DXpedition at the club picnic in October or at the Christmas party in January. John said they made 13,500 contacts.

Steve, N9PBL, had gotten a letter from the Leukemia Society of America requesting our assistance again for the 7th annual bike tour July 24 and 25. It starts in Milwaukee and ends in Sturgeon Bay with a stay overnight in Manitowoc. Mark your calendar and contact Steve if you can help.

W2GC had his name drawn for the monthly membership drawing and was not present so the prize goes to \$7.00 next month.

The meeting adjourned at 8:30 p.m. with a motion by Ken, K9HAG, and seconded by John, NZ9Z. Lunch was enjoyed by all.

After the meeting we had a program by Jerry, K9JHK, from Sheboygan on the Voice of America. His slides and presentation were very interesting. Thank you Jerry.

Submitted for approval
Mary Langer, KB9GOY
Secretary

CALENDAR OF EVENTS

April 3, 1999 - Clubroom clean-up
April 8, 1999 - Weather spotting seminar
- EOC

April 14, 1999 - Next club meeting
April 24 & 25 - Sub weekend on the USS Cobia
May 8, 1999 - Hamfest
October 5, 1999 - Kewaunee Nuclear Plant drill
October 9, 1999 - Fall family picnic at Lincoln Park
January 7, 2000 - Christmas Party at Cedar Ridge

MEETING ATTENDANCE

W6BSF	Fred
N9PBL	Steve
W9NPX	Roger
W9OMO	Ervin
KB9GOY	Mary
W9SDH	Wally
N9QFY	Dick
K9JHK	Jerry
K9HAG	Ken
N9FVZ	Dan
WS9X	Ron
N9GHE	Red
N9IQZ	Janice
N4WKG	Denise
KB9KXE	Theresa
K9LWI	Larry
KB9KXF	Gene
AA9WI	Paul
N9AWG	Rahlf
KB9GOX	Jim
N9XEZ	Bill
N9PZX	Julie
NZ9Z	John

Wisconsin Valley Radio Association

Kim Kunze, N9SDL, Secretary

P.O. Box 363 • Wausau, WI 54402

Six Meter Repeater: 51.19 Input/52.89 Output

March Minutes

Meeting called to order by N9SDI. Members present included: N9NMH, N9MEA, KB9FRB, KB9DZG, KB9MCZ, KC9NW, KB9JCQ, N9NQW, N9NRC, KB9RXA, KB9DED, N9TTA, W9WW, N9LIA, WD9CPY, and N9IAB.

Minutes as published in BSSS approved by N9MEA and N9NMH. Treasurer's report approved by KC9NW and N9TTA.

Upcoming events include:

1. Dream Flight Training at Rib Mountain School - April 5, 8, 12 and 15. Additional information will be announced on NET or contact N9SDL.
 2. MS Walk on April 18, 9:00 a.m. to 3:00 p.m. About 6 hams needed for communications support - contact N9LIA.
 3. Wisconsin Amateur Radio Recognition Day April 22. Watch BSSS for details of activities.
 4. Finally, Wausau Dream Flight will be May 3-7.
- Announcements of hamfests were also made.

Old Business

Repeaters are all operating, but there is some noise on the 2M system at times. N9MEA and N9IAB will listen and investigate.

KC9NW announced that ARES training will begin soon, plus the annual weather spotting training should be announced soon. Listen to the net for details.

N9NMH reported that we still need control operators for the 2nd and 3rd Wednesdays. Contact Matt if you can help

out.

A copy of the repeater policy of RMRA as well as information from other clubs has been obtained. The Board will review and draft a policy for WVRA and present to the general membership at the April meeting.

KB9MCZ and WD9CPY (Membership Committee) reported that they have been meeting and have some ideas that they will report to the Board at the March 16th meeting.

New Business

April 6 is the annual meeting where dues are to be paid plus elections are held. Reminder cards will be sent to all members.

Nominations are needed for the seven board positions. N9SDI and N9LIA announced that they would not be seeking re-election.

N9NRC brought up a question about what the WVRA or hams in general should be doing to prepare for possible Y2K problems on January 1, 2000. KC9NW will forward any information that comes out of Emergency Government and ARES. The WVRA is willing to assist and this should be coordinated through KC9NW.

Motion made by KC9NW, second by N9MEA to spend \$35 with the Samoset Council, BSA for rental of Camp Phillips for Field Day, June 26-27, 1999.

Adjournment passed by N9TTA and N9LIA.

KB9DED moderated an interesting discussion on the different types of feedlines that can be used. Thanks, Mike.



SHEBOYGAN County Amateur Radio Club

Steve Eisold, AA9SJ, Secretary

2220 N. 20th Street • Sheboygan WI 53083

2-Meter Repeater: 146.06 Output

March 1999

(I was unable to attend the March membership meeting. I did attend the Weather Spotting Session, offered by the Office of Emergency Management and the National Weather Service. I would highly recommend this two hour session for any one interested in severe weather spotting. My thanks to Steve, N9TRK, for recording the following minutes from the membership meeting. Steve, AA9SJ.)

The March meeting of the Sheboygan County Amateur Radio Club was called to order by Vice-president Larry, WB9FXQ at 7 p.m. local time. The meeting started with introductions with the following amateur radio operators present: Mark - KB9UAF, Ricky - KB9TNN, Larry - WB9FXQ, Steve - N9TRK, Mike - K9SJ, Charlie - N9SVV, Steve - AC9A, Chris - KG9GB, and Jim - WA9SNU.

Larry, WB9FXQ, reported on the status of refurbishing a portion of the basement of the Red Cross building for club use. Mike, KB9DBH, designed a temporary partition to segregate the radio area from the rest of the basement. The club will pay for the partition and the Red Cross Chapter has agreed to provide the electrical modifications to the space. A work party will be organized to build the partition over a weekend. Steve, N9TRK, made the treasurer's report with \$999.60 in the club's checking account.

Steve, AC9A, submitted a radio log for the monthly activity award. Steve also made a brief DX report based on his contacts over the past month.

Larry, WB9FXQ, stated that the MS Walk is scheduled for Sunday, April 18 and radio operators are needed to work at North High School as well as checkpoints at End Park, Deland Park and Vollrath Park. Hams interested in helping out with this event should contact Larry.

The club's participation in Field Day is being coordinated by Bob, KG9OM. The May meeting will be spent on discussing final logistics for the Field Day weekend.

Mike, K9SJ, moved and Charlie, N9SVV, seconded a motion to offer the club's unused quad antenna to Chris, W9RF. This motion was approved with no opposition. The evenings technical presentation was on digital communications and was presented by Mike, K9SJ. Mike used an HT connected to a laptop computer via a Baycom modem to link to the DX cluster. Other digital modes were also presented by Mike.

The next meeting of the Sheboygan County Amateur Radio Club will take place at 7 p.m. on Tuesday, April 13 in the basement of the Red Cross Building, 2032 Erie Avenue in Sheboygan. An open club officers meeting will take place at 7 p.m. on Tuesday, March 23 in the basement of the Red Cross Building.

Respectfully submitted:
Steve Billings, N9TRK

Stories, articles, and photos are always welcome for publication. Op-ed letters are, too. Send to the editor, address on page 2.



WB9QFW 2-Meter Repeater 146.07-.67 and Club Station

2229 Dixon Street • Stevens Point, WI 54481

Meeting Minutes March 10, 1999

President Al Mallek, K9WVM called the meeting to order at 8:45 p.m. Before the meeting, there was a Severe Weather Spotter's Class from 6:30 to 8:30 p.m. Both the class and the meeting were held at the County City Building. A tour was given of the Emergency Government Office and the new equipment they have. 147.330 will be programmed into the Emergency Government Office's radio equipment as well as 146.985 simplex.

After a discussion, it was decided to cancel the Swapfest for this year. Mike Pagel, K9UW, will cancel our reservation at the University Center. We will immediately begin to plan it for next year, and possibly looking into a new date if necessary so that we do not conflict with other swapfests. The raffle fundraiser that is normally held in conjunction with the Swapfest will be held. The drawing will held at the September 8, 1999 meeting at 8 p.m. The raffle will consist of cash prizes. Al Mallek, N9WBS, is in charge of the raffle and will be ordering 2,000 tickets.

Mike Peters, W9CO, moved to adjourn, Bob Baird W9NN, seconded, the

motion passed and the meeting adjourned at 9:03 p.m.

The next meeting will April 14, 1999 in Room A107 at the UWSP Science Building.

*Respectfully Submitted,
Mary Eiden, KG9OK
CWRA Secretary*

ATTENDANCE

Dick Drew
Bob Baird
Al Mallek
Jerry Fadness
Al Mallek
Jack Everman
Mike Pagel
Roger Kanieski
Janice Kanieski
Joe Larson
Rick Abbott
Art Wysocki
Mike Eiden
Scott Jasper
Jan Rydberg
Allan Taylor
Joe Omernik
Mike Peters

K9PJB
W9NN
K9WVM
W9GF
N9WBS
N9MDH
K9UW
N9RK
W9JSK
N9JW
KB9LGB
N9BCA
N9MI
NE9U
KB9RUJ
KF9WR
N9CGV
W9CO

Taylor County Area Amateur Radio Club

Mike Schoenfuss, N9GHZ, President

P. O. Box 401

Abbotsford, WI 54405

MEETING ANNOUNCEMENT

The next regular meeting will be held on Thursday, April 1st at 7 p.m. in the Emergency Government meeting room located in the basement of the sheriff's annex to the Taylor County Courthouse, corner of 2nd and Ogden Sts., Medford, WI. Talk-in on the 147.15 Medford repeater (+600 kHz) or 146.52 MHz simplex.

CLUB ANNOUNCEMENTS

✓ The club's VE testing team is sponsoring a VE Amateur Radio test session on May 1st. Location is the conference room in the basement of the sheriff's annex to the Taylor County Courthouse in Medford. Registration starts at 8:30 a.m., testing starts at 9 a.m. Please help spread the word.

✓ Please note that we are still without a club secretary for 1999. Anyone wishing to volunteer to fill this position should contact a current club officer.

✓ For several months now, someone has been linking the 147.15 Medford and 146.64 Wausau repeaters. This is occurring randomly, on many different dates and at different times. Hams conversing on the .64 machine apparently do not realize that there is an active link between the two machines, and it appears that the link is being established by a third, unknown party. In addition, on many occasions, it became apparent that both hams involved in the QSO are nowhere near the Medford area, therefore, there would be no real need to have the two repeaters linked.

A check with the .64 repeater's sponsors revealed that they have nothing in place to enable such a link from the repeater, so it is being accomplished from a site other than the repeater location. The officers and membership of the Taylor County Area Amateur Radio Club feel that these actions are inappropriate and should cease. We are requesting the assistance of the area Amateur Radio community, particularly hams in the Wausau area, in

helping us track down the individual(s) responsible for this unnecessary and annoying linking

OTHER NEWS

Louis Young (KA9UXN) of Colby, and his wife Joan, recently made a trip out to California to visit their son Scott, N9-FZS, and help him with his move into a new home he had just bought. While there, Louis decided to check out Scott's neighborhood to see if there were any other hams living close by, and went out antenna hunting. It turns out that one of the hams in Scott's neighborhood is none other than Gordon West, WB6NOA. Louis got a tour of his ham shack and a signed QSL card.

CLARK/TAYLOR COUNTY AMATEUR RADIO EMERGENCY SERVICE (ARES) NEWS

Mike Schoenfuss, N9GHZ
ARES Emergency Coordinator

Don't forget to try to check into the weekly ARES net held Wednesdays at 8:30 p.m. on the Medford repeater (147.75/147.15). If the repeater is down or not functioning properly, alternate frequencies, in order, are 147.15 MHz simplex and 146.52 MHz simplex. You're also encouraged to volunteer for net control duty for the net.

IMPORTANT UPCOMING DATES

Please mark your calendars for these dates and try to participate if you possibly can:

4/22/99 - Simulated ARES/SKY-WARN nets to be held in conjunction with Tornado Awareness Week. The nets will start at 1:15 p.m. and finish at 2 p.m. The

Please turn to page 12

Wisconsin Nets Association Ltd.

Art Evans, KA9KLZ, Secretary
213 N. Jefferson • Cuba City WI 53807-1558

WISCONSIN NETS

Net	WNA	Freq.	UTC	CDT	Manager
BWN	Yes	3985	1100	0600	W9RCW
BEN	Yes	3985	1700	1200	KE9VU
WSBN	Yes	3985	2230	1730	WB9WHQ
WNN	Yes	3723	2300	1800	KB9OCZ
WSSN	Yes	3645	2330	1830	N9BDL
WIN/E	Yes	3662	0000	1900	WB9ICH
WIN/L	Yes	3662	0300	2200	W9UW
RCRA	No	01/61 (Mondays CDT)	0030 (Menomonee Area)	1930	KA9OMC
Gr. Bay	No	72/12 (Green Bay Area)	0245	2145	WB9NRK
ARES	No	4.65/5.25 (South East/South Central Wisconsin)	0200	2100	
RACES	No	3993.5 (LSB Sunday)	1400	0900	WA9OAY

Wisconsin NTS Traffic Report February 1999

Check-ins were up and traffic was down a bit in February. Net times were also down a little but that is to be expected in a short month. With all nets reporting, 3343 stations passed 1866 messages in 5059 minutes. BWN/1557, BEN/58, WSBN/73, WNN/19, WSSN/26, WIN-E/97, and WIN-L/36.

Nine stations had traffic totals in excess of 100, five of whom made Brass Pounders League. The stations are: K9-JPS/758 (BPL), W9RCW/623 (BPL), K9RTB/536 (BPL), K9GU/479 (BPL - more than 100 deliveries), W9IHW/442 (BPL - more than 100 deliveries), WB9-YPY/402, W9CBE/333, N9KHD/197, and N9IAI/113. Thirty stations submitted Station Activity Reports, and twelve stations submitted Public Service Activity Reports.

I will be out of the State during the reporting period next month. I will be gone from March 17th to April 8th. All reports will go to W9CBE during the

March reporting period.

I mail my reports to League Headquarters on the 7th of the month. That makes the deadline for reports the 6th. I can accept reports until I start printing them up for mailing. If you can catch me on the BWN on the morning of the 7th all would be well.

Hale Blakely, W9CBE, Asst. STM will also accept reports and forward them to me. Hale covers most of the CW and SSB nets so there is someone on almost every net to take reports.

Reports can also be sent VIA packet or e-mail.

My packet address is:
KA9KLZ @ KC9KQ.WI.USA.NOAM

My e-mail address is:
aevans@mhtc.net

Thanks to all stations who participate in the Wisconsin nets. You are the nets and Wisconsin nets are the best. 73.

Submitted by:

Arthur A. Evans, KA9KLZ
Wisconsin Section Traffic Manager
March 8, 1999

Quarter Century Wireless Association Southeastern Wisconsin Chapter 162

Larry McCalvy, WA9JMO
5400 Six Mile Road
Radne, WI 53402

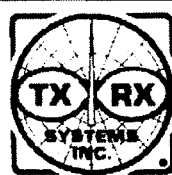


Our Chapter has been asked to provide communication for the annual Lutheran High School's 10K Walk-A-Thon on May 7th. Our communicators will be stationed at each of the six check points, two will be assigned as rovers working with teachers who will be continually traversing the route, one will drive solo following the last walkers, and one will coordinate the groups effort at the school allowing the walk's director full knowledge of how the walk is progressing. We will start at 7 a.m. and everything will be wrapped up by 10 a.m. We should have a lot of fun as we

provide a worthwhile community service.

President Spencer Clope, W9LDH, has formed the following 1999 committees: Nominations: Ed Konicek, W9NVK, Chair, with Chuck Knotek, W9GKM, and Ken Knoff, N9NBC, as members. Olie Fox Award: Larry McCalvy, WA9JMO, Chair, with Chuck Knotek, W9GKM, and Fern Fisher, W9LCJ, as members. Sunshine: Chuck Knotek, W9GKM, Chair, with Herb Ladwig, W9PHJ, and Fern Fisher, W9LCJ, as members. Audit: Ed

Please turn to page 12



VARI-NOTCH® DUPLEXERS FOR 2 METERS

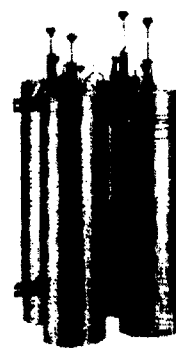
The TX RX Systems Inc. patented Vari-Notch filter circuit, a pseudo-bandpass design, provides low loss, high TX to RX, and between-channel isolation, excellent for amateur band applications. TX RX Systems Inc. has been manufacturing multicoupling systems since 1976. Other models available for 220 and 440 MHz, UHF ATV and 1.2 GHz.

MODEL 28-37-02A

144-174 MHz
92 dB ISOLATION AT 0.6 MHz SEPARATION
400 WATT POWER RATING

TX RX SYSTEMS INC.

Dave Barquist, K9PAK, Factory Representative
414-387-2929 or E-Mail brx@electpdc.com



19" RACK MOUNT

*Steve Hart, KA9OMC
Secretary/Treasurer, RCRA*

Governor proclaims April 22, 1999 Amateur Radio Operator Awareness Day



Wisconsin Governor Tommy G. Thompson, front row at left, reads the Amateur Radio Operator Awareness Day proclamation before signing it in a ceremony in the governor's office in the state capitol in Madison. At right front is Dave Schaefer, N9DMS, President of the Four Lakes Amateur Radio Club of Madison. In the back row, left to right, are Duane "Mack" Brophy, N9NTB, Sun Prairie, Wisconsin Emergency Management Volunteer Liaison; Don Evenson, K9JYX, Baraboo, Editorial Board Member of Badger State Smoke Signals; Stan Kaplan, WB9RQR, Port Washington, Section

Emergency Coordinator, Wisconsin Section ARRL; Tom Weeden, WJ9H, Madison, South-Central Wisconsin Skywarn Emergency Coordinator; David Barrow, N9UNR, Ozaukee County ARES Emergency Coordinator; and Gary Cannalte, WU9U, Meteorologist at WISC-TV, Channel 3 in Madison (active in Skywarn as well).

Photo by
Jim Romelfanger/K9ZZ

So, what do we do with it?

At the risk of being repetitious, April 22, 1999, has been proclaimed Amateur Radio Operator Awareness Day in the State of Wisconsin by Governor Tommy G. Thompson. And everyone reading this is indeed aware of what and who we are. That's fine, but it's "preaching to the choir". "Joe and Jane Public" are the people who really should be told. That's where the news media and yourself come in.

Simply telling a newsperson about the proclamation or even mailing copies to media won't even get you halfway to first base. Proclamations are issued all the time and for some groups none of us ever even heard of. (I can vouch for that personally.) And that is where *you* come in, dear reader.

If we, as the amateur radio community in Wisconsin, actually want to publicize the proclamation, more than the above has to be done. And here is what "more" is.

Call ahead for appointments with your local newspaper editors and radio and TV news directors. Tell them of the proclamation, and tell them what *you* have to do with it. In other words, to get into the media with any of this, the story needs what is called a local "hook". And that hook is your club's secretary, your Emergency Coordinator, or maybe just yourself.

When you meet the editors and news directors, tell them about Skywarn and how it saves lives every year. Look over the text of the proclamation. If you teach ham radio classes to kids, tell the media that, too. If you think of something that may not be included in the proclamation's text but may be interesting, say it.

What you are hoping to have happen is an interview, with a published or broadcast story as a result.

When you make the calls, identify yourself and give any titles you may hold, such as club secretary, Skywarn spotter,

whatever fits. When you go for your interview, remember that whomever interviews you probably understands *nothing* about amateur radio. Be sure you create the awareness that we are *not* CB operators, and that we pass examinations for our licenses.

Let the interview "flow". It actually will likely be more a conversation than an interview.

The reporter may want to come to your home to write a story and perhaps take some photos to print. (Ask to not have your address printed. That's to help prevent an "admirer" of your story from taking your equipment when you aren't home.)

If, when the interview is completed, you remember something you feel should be included in a story, tell the reporter, but do not be forceful. Let the reporter decide. Be what you really are - nice. Do be sure to invite the reporter to your Field Day location. And, are we getting ready for Y2K? Yes! In fact, that's exactly why we "do" Field Day every year, to be ready for emergencies and to learn what we need to operate under emergency conditions.

I'd be interested in seeing newspaper clippings of the stories that are done. Please send them to me at my address on page 2.

If you'd like an email ASCII copy of the text, let me know at:

smokesigs@baraboo.com

If you'd like a photocopy of the document itself, send me a 9 x 15" SASE with two units of first class postage affixed.

Now.. start dialing, and good luck. You'll do just fine.

Jim Romelfanger, K9ZZ
Public Information Officer,
Wisconsin Section, ARRL

Proclamation Text

This is a "rerun" of the text of the gubernatorial proclamation on the front page of Amateur Radio Operator Awareness Day on April 22, 1999. The type here is larger, and that's why we are repeating it; it should be easier to read.

The State of Wisconsin Office of the Governor A proclamation

WHEREAS, during times of national and state emergencies amateur radio operators continue to provide communication resources; and

WHEREAS, these communications resources are provided at no cost to the Wisconsin taxpayer; and

WHEREAS, there continues to be a need for amateur radio operators to provide emergency communication capabilities as a backup resource during state and national emergencies; and

WHEREAS, amateur radio organizations such as the Radio Amateur Civil Emergency Service (RACES) and the Amateur Radio Emergency Services (ARES) are organized and trained to provide emergency communication support; and

WHEREAS, amateur radio clubs throughout the State of Wisconsin provide radio courses of instruction, encourage and assist with grade school and high school programs about amateur radio, and provide the opportunity to become a licensed amateur radio operator; and

WHEREAS, amateur radio operators informed the world about such events as Wisconsin's Sesquicentennial and Wisconsin's circus heritage including the Circus World Museum, the Great Circus Train, the Great Circus Parade; and

WHEREAS, amateur radio operators, participating in SKYWARN, provide trained and radio equipped severe weather spotters to assist the National Weather Service and the State of Wisconsin;

NOW, THEREFORE, I, TOMMY G. THOMPSON, Governor of the State of Wisconsin, do hereby proclaim April 22, 1999 as

AMATEUR RADIO OPERATOR RECOGNITION DAY

in the State of Wisconsin, and I commend this observance to all citizens.



THE WISCONSIN PACKETEER

Wisconsin Amateur Packet Radio Association
Allen Schnepf, NØGMJ, Treasurer
Ogema, WI 54459

Andy Nemec, KB9ALN, Editor • 453 Cottage Grove Avenue • Green Bay, WI 54304 • e-mail: kb9aln@juno.com

WAPR News - April, 1999

Hello everyone, and Happy April Fools!

This April, I have no lighthearted articles to share with you, unfortunately. I do have some fairly serious stuff to talk about, however, and hope that it generates the kind of discussion it deserves amongst packet operators in the state. More on that in the companion column, "A Call to Action".

I do, however, have a few items of news to discuss. First off, a possibility of a new network node near Milwaukee.

As you may well know, the absence of Dan, WB9TYT in the last few years has been felt profoundly in that area. Dan had an extensive system of nodes that served Milwaukee County and it's neighbors quite well for years. He retired, and packed up his things to winter in Florida, and spend his hours in more leisurely pursuits.

No one was waiting in the wings to maintain a node stack, and I hear that the situation in Milwaukee is rather disheartening to packet enthusiasts in the City of the Brewers. Recently, I had a conversation with a longtime friend who has expressed interest in constructing a backbone and LAN node just outside of Milwaukee. He has asked that I conduct a "survey" of sorts to determine if the node will be supported by the local folks.

By "support" I do not mean monetarily; I mean used and appreciated by packet operators in Milwaukee. He will have the capability to link northward and perhaps become part of the rest of the state's network. There will be other things that would need to be done for this to happen, but this survey is the first step. My friend is willing to pay the cost of construction, so for all intents and purposes, it would be free of monetary cost for the users and for WAPR.

I would say that having Milwaukee linked into the Wisconsin Network is very important, especially with the coming "Y2K" situation (see the other companion article on this page). What I would like to do is for packet operators in Milwaukee to send mail to me with their thoughts on the subject. Because the network surrounding this area is very chancy at best, it may be wiser for you to mail me via U.S. Mail or via E-Mail. I often have trouble getting mail to and from Milwaukee via the BBS forwarding system, and this is one reason why I would like to see this happen. So, please do send me your thoughts and let me know if these proposed nodes would be used. If you have put your TNC on a shelf because you have no reason to use it, this proposal could give you reason to dust it off and play once again. Please send your thoughts to me at one of the addresses listed at the top of this page.

Now on to some even better news. I recently received a note from Jim Jolin, WA9ARB in Sturgeon Bay. He informs me that the Door County Backbone node is almost ready for service. Until now, the folks in Door County have relied on a shaky connection to the network through the LAN node in Algoma. This will also allow them to start up a full-service BBS to serve the county, and allow much faster and reliable access to the packet network in Northeastern Wisconsin. We wish them all the luck in the world with the new node, and look forward to checking it out when it comes on the air.

The Door County Amateur Radio Club also has a new Web Page. You can find it at: www.itol.com/~w9ovo

Another news topic I would like to discuss is the coming Spring WAPR meeting. As of this writing, the plans are being made to have the meeting on the same day as the Madison Swapfest on April 11th. If possible, we would like to have it at the hamfest site. Please check your BBS for an announcement as to the time and place of the meeting.

We'd like to make this a high-turnout meeting. Actually, we would like to make all of them high-turnout meetings, but realize that this is not always possible for all folks. This one is important because we have the coming Y2K situation that should be planned for, and packet radio may very well be a big part of it.

This would also be a good time to make a general assessment of our network, and see where we need to expand and adapt. Your thoughts are appreciated, so we hope you do attend.

And that is all for this month. Until next time, 73 from Andy.

Andy Nemec, KB9ALN

Internet E-Mail: kb9aln@juno.com
AmateurAX.25:
KB9ALN@KB9ALN.#GRB.WI.USA.NOAM

Y2K and Packet Radio

by Andy Nemec, KB9ALN.

Much has been written about the "Millennium Bug", which we have all come to recognize as "Y2K". In short form, this deals with the inability of certain computers and associated equipment and software to correctly recognize the year 2000 and deal with it appropriately. How much impact will this have on the packet community? Quite a bit and none at all, depending on the situation and exactly what piece of equipment you are talking about. To start, let's look at the stuff inside your shack.

The Boxes In Our Shack

Most packet operators, assuming that they have power through the transition, will not suffer any ill effects from the rollover of the year. TNCs are not critical systems, they do not need to know the date to function properly. Sure, date stamps appear on your mailbox messages and on your monitor screen. However, TNCs are not reliant on the date to operate. In fact, I have seen many TNCs that do not have the date set at all, and this does not affect them one bit.

The same can be said of most computers. The computers most likely to be affected by the inability to process dates are older 286, 386, and 486 based machines. These machines will most likely operate just fine with an incorrect date. Packet terminal and host programs, for the most part, will operate fine without the date set. I know of only one program that will not operate unless the date is correct, and that is Eskay Packet SP, from Germany. Other programs that are of the same style may also be affected, such as Baycom (unlikely) and Graphic Packet, otherwise known as GP. However, the more common terminal programs like Hostmaster, PC-Packratt, and MFJ Host will do just fine.

Computer-based Network Operating Systems are another matter. Some of these systems are reliant on the date because of their expanded capabilities. For example, TCP/IP systems operating under Linux may see problems. Linux systems are capable of a lot of automation of routine tasks, and this is all based on time and date. If a Linux system remains running throughout the date rollover, chances are it will be OK. Linux itself is "Y2K Compliant". However, older computers that use it as an operating system may find problems when they shut down and reboot. This is because the operating system, when it is booting, obtains the date from a "real-time-clock" inside the computer. If this clock is not capable of dealing with the year 2000, this can cause a problem for the operating system, and problems for any software that may be trying to run.

There are tests you can perform to check your computer's Y2K compatibility, more on that later.

Boxes Outside Of The Shack

These are basically network nodes, packet switches, and other network management equipment. Luckily, most of the hardware in place in the Wisconsin Network will not be affected, other than for power.

TNCs used in a network node stack that you will typically find in the state are all standard commercial TNCs that do not need to know the correct date to function. The firmware inside has been replaced with node firmware, and it is not reliant on knowing the date to function. The only real effect may be a loss of power at the node site.

BBS operators and those who operate complex packet switching hardware that is reliant on computers may experience the same kind of problems as those who operate Network Operating Systems utilizing TCP/IP programs like JNOS and TNOS. They may not operate because of an incorrect date, or functionality may be affected in one way or another. Because there are so many options out there for this type of service, I have not had the opportunity to check them all.

Influences Outside Of The Shack

This is where you are most likely to experience the most profound effects of the Y2K problem. Two things come to mind here, one is loss of power to operate your shack. This can be overcome with Uninterruptible Power

Supplies (UPS) and battery power for the short term. Generators with sufficient fuel can recharge depleted batteries, or car charging systems can accomplish the same thing. Very many hams are already set up for emergency power, but if you are not, now is the time to deal with this.

The other influence is the outside world in general. Many hams have already begun emergency planning and know that the State of Wisconsin is also planning for a number of disaster-type scenarios. They will rely heavily on nearly all of the amateur radio systems in place in the state to carry out emergency communications. This not only includes packet radio, but VHF/UHF FM Voice and HF voice. As a result, we must be capable of dealing with prolonged power outages effectively and be available to function in an emergency operating capacity.

This means that we all have to be involved in planning and seeing that our systems are functional in a disaster situation. This may likely be the biggest impact of the Y2K situation.

Checking for Y2K Compatibility

For computers, this takes a small amount of time and is well worth the expenditure, if you plan on being active in emergency situations. Most operating systems (MS-DOS, it's offshoots, and Linux/Unix) can deal with the date rollover on January 31. But the operating system gets it's starting date from the computer's hardware. So, it is prudent to check this out before the big day rolls around. Here's what you would do to test your system.

1) Set the time to 11:55 PM, the date to January 31, 1999 in your computer's CMOS setup program.

2) Let the computer run and see if it changes to January 1, 2000.

3) If it does not, then you may need to change your operating system or update it in some way. For example, if you have been using MS-DOS v3.3, you may wish to upgrade to MS-DOS 6.22. If you are using Windows 3.11, you may need to obtain a patch from Microsoft.

4) With the date still set to January 1, 2000, shut the computer down and reboot.

5) Now check the date with the appropriate command. If it reads something other than January 1, 2000, it has failed the test.

6) Check for Leap-Year compatibility. Shut the system down and go back into your computer's CMOS setup program. See if it will accept February 29, 2000 as a valid date. If not, you are OK. If it does, then you will have to either upgrade your computer's BIOS, update the computer, or manually change the date when March 1, 2000 rolls around.

While many people have predicted dire consequences for this change of dates, we will most likely only be inconvenienced rather than face a disaster situation. However, public agencies are expecting us to be able to help them out should the worst happen. It's best to prepare now rather than be sorry later.

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A Call To Action!

by Andy Nemec, KB9ALN

The following editorial reflects the opinions of the author, and does not necessarily represent the opinions of the officers and membership of WAPR.

Lately we have seen a certain degradation of the packet radio network in Wisconsin, and this has been a source of concern for myself and others of late. This is not necessarily a function of packet radio itself, but reflects an evolution of Amateur Radio that we may find a bit disquieting.

While there are plenty of theories for this uncomfortable change, no one can safely say that they have "The Answer". I suspect there is no one solid answer, rather a series of events and a collection of influences that have combined to create a certain ambivalence on the part of ham radio operators. Ambivalence to the need for a functioning packet radio infrastructure, improvement of that infrastructure, and to the art of packet radio itself.

Why You Should Care

This is really quite elementary. Aside from the enjoyment factor present in packet radio, there is a very real need to provide emergency communications for state, county, and local emergency government entities. Don't believe me? Think that we have been obsoleted by cell-phones? Then you have not operated in an emergency drill or an actual emergency recently. I will tell you of a real-world example that may change your mind about this.

This scenario shows up a unique set of problems, problems that we can help to solve. Every year the Kewaunee County Emergency Government takes part in a drill for one of two nuclear power plants that are in or adjacent to the county. I have participated in these drills for the past 8 years, and have noticed a subtle change in the way these drills are conducted.

For the first 5 drills that I participated in, communication was done largely by fax and telephone. We used voice repeaters to supplement communications and verify faxes, etc. If the fax machines went down, or there was a telephone bottleneck of some sort, we stepped in to complete the communication.

Lately, we have seen an increased reliance on E-Mail. These drills now are often run almost entirely on E-Mail. Yes, the internet has made an impact here. However, drill participants have been lulled into a false sense of security. Internet service is every bit as vulnerable as the telephone is - largely because that is how it is accessed. While the internet itself may not be affected, access to it may well be impossible. And if you can't get to it, the internet may as well be non-existent. All of the sudden, we have a real problem. The Amateur Emergency Communications systems may well be overloaded. Disaster workers may be undertrained in operating "the old way" and will doubtless be a source of delays for crucial communications. Not to mention the fact that if the telephones do go out, that is one more area of complication to deal with.

The implications of this should be obvious. Not only do you stand to be affected, but your friends, family, and relatives also will be affected. That is, in a nutshell, the reason why you should care.

What Needs To Be Done

There are two phases to this - One is to have a packet network that is operational when things go bad and disaster strikes. That means emergency power to most people, but there is a second phase to this that has apparently not been thought of by most hams. That is interoperability with the data communications systems that are already in place in the emergency operating centers present in cities, counties, and the state as well.

Let's examine the network itself. It is my firm belief that virtually anyplace in the state - and I do mean ANYPLACE - should be able to make a reasonable packet connection with the Wisconsin Division of Emergency Management offices in Madison. They are packet radio equipped, so that is one part of the system that is already in place. However, we are far from having the ability to communicate via packet radio easily from any part of the state. We need more network nodes, and more network facilities in all of the counties in Wisconsin. Currently, a connection between the northeastern part of the state and Madison is possible, depending on the way the wind blows, and how lucky we are.

And we also need to make a concerted effort to increase the speed of our network. This means user LAN nodes of 9600 bps or greater. Backbone speeds can be doubled from 9600 bps to 19,200 bps. The added load of emergency communications, and the urgent nature of it, require that we use the maximum data transfer speed we can attain.

We also need standardization. I firmly believe that ALL network and LAN nodes in Wisconsin should be capable of handling TCP/IP traffic, and they should function well at that task (as well as standard AX.25 operation). The reasons will become apparent below.

The reason is that is the way the various agencies involved in an emergency situation communicate. As I said earlier, they do it with E-Mail. E-Mail operates on a standard method that uses - you may have guessed - TCP/IP. In the event that the Internet is inaccessible to any of these agencies, we may need to intervene and transfer this E-Mail. We can't ask emergency workers to learn a new system just to accommodate our unwillingness to implement something different. They have enough to do already. It is our job to see that their communications are as seamless as we can possibly make them.

And the last part of the equation is implementing servers and working with Information Services personnel so that in the event that Internet access is lost, a simple command on a server can divert E-Mail through us. This means setting up systems at the Red Cross, City and County Emergency Operating Centers, and other emergency agency sites.



Yellow Thunder Amateur Radio Club

WB9FDZ (Original Club Call)
K9ODK (Robert L. Prine Memorial Call)

Raymond J. Matlosz, N9MLZ, Secretary
450 West 2nd Street • Reedsburg, WI 53959



The March 2, 1999 meeting of the Yellow Thunder Amateur Radio Club, Inc., was called to order at 7:42 p.m. by Bill Klinkner, N9KXX, club treasurer.

Minutes for the February meeting was approved with the following correction: Meeting was February 2, 1999 vice February 1, 1999.

Financial report was accepted.

ANNOUNCEMENTS: Received the following flyers for swapfests from: Mancorad Radio Club Hamfest May 8 Manitowoc, WI. included one ticket Northshore Radio Club, LAMARSFEST, Grayslake IL, included tickets

Please give the club secretary your current e-mail address if you have not been receiving the minutes by e-mail. Thank you.

There will be a service for silent key Harry Mayland K9FFT at Walnut Hill Cemetery in Baraboo, Mar 6 at 11 a.m.

OLD BUSINESS: No report regarding the status of the club generator being sold.

NEW BUSINESS: Fox Hunt to be held May 4, 1999 at 6:30 p.m. at the civic center. Winner to receive a plaque. Win to see it. (there was a discussion as to exactly what it looked like). The Madison Swapfest is April 11. Both YTARC and BATS will have a table. Field day will be June 26 & 27. Discussed and approved looking into prices of equipment and location for a club repeater.

Buck night winner: Gary Pratt, WB9ECO who was

not present.

Meeting adjourned at 8:30 p.m.

Next meeting is Tuesday April 6, 1999 at 7:30 p.m. room 14, Baraboo Civic Center.

Raymond J. Matlosz, N9MLZ
Club Secretary

The following members were present:

Duane Grotphorst	N9DG	North Freedom
Jim Paul	N9LKY	Baraboo
George Gabay	N9QQR	New Lisbon
Art Kleefisch	N9WSS	Baraboo
Leonard Wagner	N9XJG	Baraboo
Bill Klinkner	N9KXX	Sauk City
Anne Klinkner	N9PQL	Sauk City
Patrick Klinkner		Sauk City
Thomas Harrison	N9PQJ	Reedsburg
Raymond Matlosz	N9MLZ	Reedsburg

Why Not?

There is no conceivable reason why this cannot be done. It can't be done quickly, but we ALL should work on this as soon as possible. Our amateur facilities are dated; we work at 1200 bps most of the time, and a lot of nodes will not handle TCP/IP effectively, if at all. I do not know of one network integrated server that is set up to do the kind of tasks needed to be done anywhere in the state. Our network is up to 9600 bps in some areas, and that is surely an improvement over what we have been using. But, user LAN frequencies should be set up for faster operation. It is possible to double that speed without too much trouble modifying equipment.

Is all this ambitious? Yes, very much so. But it is, I daresay, a situation of our own making. We have been all too willing to accept the status-quo and not "push the envelope". As hard as you may find this to believe, Wisconsin has one of the more advanced packet radio systems in the country. In spite of all of this, it is still lacking.

So, it not only is a matter of practicality and making ourselves more useful, it is a matter of pride, so to speak. We can make it a point to push the envelope and make a network and system that is the envy of other states. We can truly contribute to the advancement of the radio art in a practical, public service-minded way. Of course, I will not leave you without any suggestions on how to do this.

How To Start

Start on the regional or local level by forming a task force of interested people. Not only should you enlist the aid of technical people such as radio technicians, you will need people with computer expertise, public relations talents, and fund-raising savvy.

Next, look for statewide standardization. We cannot expect a seamless system if all parts are not assembled to the same standards - it just can't work that way. That is one of WAPR's chief reasons for being - to coordinate the operation of the state packet network.

This can be done at a series of state packet radio conferences. Representatives from all areas of the state can get together and contribute their ideas concerning this standardization. Collaboration amongst amateurs can make a big job much easier to manage. Hints can be shared, ideas can germinate and take root.

Conclusion

I know what I have advanced seems like a formidable task. Yes, that is one of the parts of our hobby that comes with the free use of millions of dollars of radio spectrum. We do this work to insure that we are able to perform the public service that we have been charged with carrying out.

Rather than thinking of this as some kind of cross to bear, think of it as a challenge that needs to be met and an opportunity to become more knowledgeable about our chosen fancy. We all stand to learn a great deal about data communications, and about our ability to do what seems to be impossible.

So, I urge you to start the process rolling in your area. Don't become complacent. Our band allocations are being

threatened; the best defense is to make ourselves useful. People tend to remember that - the very people who can influence our frequency allocations and yes - even our very existence. Don't become complacent about our future, tackle it head-on and with enthusiasm. Not only will you be performing a good public service, but you will have more fun, too!

73 from Andy Nemec, KB9ALN
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AmateurAX.25:
KB9ALN@KB9ALN.#GRB.WI.USA.NOAM



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from FOXTAILS (Green Fox Amateur Radio Club)

How come a slim chance and a fat chance can be the same, while a wise man and a wise guy are opposites?

How can overlook and oversee be opposite while quite a lot and quite a few are alike?

You have to marvel at the unique lunacy of a language in which your house can burn up as it burns down.

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P. O. Box 102 South Milwaukee, WI 53172

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For Information Contact:

ECARC
P.O. Box 1867 Eau Claire, WI 54702-1867
<http://www.ecarc.org>

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Friday, October 1, 1999 • 7 p.m. to ??

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Web: <http://www2.wi.net/~hamradio/auction/HTML>

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8 a.m. to 1 p.m. • Circle B Recreation Center
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Swapfest sponsored by the Ozaukee Radio Club
1702 Holly Lane, Grafton, WI 53024

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Bill Klinkner, N9KXX (608) 643-6908/643-6453
<http://www.thelox.com/~sschulze/hamfest.htm>

Red Cedar Repeater Association, Inc.

AUCTION

February 23, 1999 • 7:00 p.m.

American Legion Post 53 • 634 Water Street
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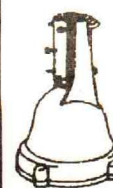
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